

The **Management** **REVIEW**



MAY, 1946

COMMENT • DIGEST • REVIEW

AMA CONFERENCE ON

General Management Problems

THE WALDORF-ASTORIA, NEW YORK CITY

JUNE 11, 1946

Top management faces unprecedented problems in the transition to a peacetime economy. Pressures of public opinion, government regulation, employee demands, and consumer needs pose challenging questions, many of which were not even anticipated in postwar planning.

To help executives with policy-making responsibilities meet this challenge, the American Management Association will hold a one-day conference at which practical information and opinions will be exchanged by top management on some of the more pressing of these problems. Special stress will be laid in the conference discussions on new developments in the fields of employee and public relations.

The addresses will be informal, designed to encourage free and intimate discussion from the floor. Among the topics tentatively selected are:

THE IMPACT OF INFLATION UPON CORPORATE
FISCAL POLICIES

TECHNIQUES OF POLICY FORMULATION AND
ORGANIZATIONAL CONTROL

TRAINING EXECUTIVES TO MEET LABOR UNIONS
ON EVEN TERMS

EXECUTIVE TRAINING AND DEVELOPMENT

PROFIT SHARING—ITS ADVANTAGES AND LIMITATIONS

RESPONSIBILITY FOR PUBLIC RELATIONS POLICIES

The conference will comprise morning, afternoon, and evening dinner sessions. At the close of the afternoon session, the American Management Association will hold its Annual Business Meeting, as provided by its by-laws. At that time, the President will present his annual report, new Board members and officers will be elected, and an informal discussion of the Association's activities will follow.

AMERICAN MANAGEMENT ASSOCIATION
330 WEST 42nd STREET, NEW YORK 18, N. Y.

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INDUSTRY may be heading for a disaster similar to that which overtook it in 1920 unless some way is found to prevent prices from going sky-high and yet permit them to attain an equitable level where they will cushion the shock of higher wages and costs. This is the major conclusion reached by Eugene Whitmore in an abstract in this issue (**Will Higher Prices Bring a Crash?**—pages 153-154), which draws some disturbing parallels between conditions today and those in the post-World War I period.

Back in 1920, there was a scarcity of goods and labor; prices were high, but workers had plenty of money in their jeans; and, as is the case today, management was harassed by labor troubles. Factory workers were buying silk shirts at \$8.95 apiece and paying 31 cents a pound for sugar. Then a consumer reaction set in which slowed buying and started an avalanche of price cuts that bankrupted many firms.

Today stocks are up about 120 per cent; construction costs are up to as much as double prewar levels; retail dollars buy approximately 77 cents in merchandise. "Are we getting along toward the period when the public will revolt and refuse to pay high prices?" inquires Mr. Whitmore. "Is there no alternative between violent reactions, similar to that which occurred in 1920, and some form of price control?" Only if sound business judgment prevails, he believes, will it be possible to avert a national catastrophe.

HOW the history of an enterprise or industry can contribute to the solution of current business and economic problems is pointed out by C. W. Moore in **Experience as a Corporate Asset**. Many present-day problems are old dilemmas in modern dress, and today's failures are frequently repetitions of yesterday's errors. A carefully compiled company history provides innumerable parallels which the executive can draw on in appraising the present and the future.

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THE MANAGEMENT INDEX

General Management

Experience as a Corporate Asset

By C. W. MOORE
Assistant Vice President
SKF Industries, Inc.

WHEN the board of directors meets to appraise the major executives of a corporation and to set the compensation for their services, it is concerned chiefly with each man's experience and his ability to use that experience successfully. Other considerations are of a lower order of importance. Academic training is a remote and more or less immaterial factor; the "self-made" man stands as high in the esteem of the directors as his erudite associate of equal accomplishments. Personality and poise have their inevitable effect, but the directors will strive to disregard such extraneous diversions except as they are reflected in performance. Personal loyalty, group solidarity, and interlocking financial interests are given due weight, but *experience* should be, and usually is, the dominant consideration—it is the prime asset of the individual business man.

The selection of executives on the basis of experience is the solid foundation upon which American business management has been built. The record is impressive, a source of pride at home and of envy abroad, but there has been increasing evidence since

1930 that the more difficult problems of corporate management have not been adequately solved by the formula of personal experience. The atmosphere of uncertainty in which business is conducted, the strained relations with labor and government, and the unsatisfactory returns in the form of profits, wages, and employment are the outward signs of fundamental maladjustments that remain uncorrected. This increasing backlog of unsolved business problems has now assumed threatening proportions, and the ability of the business community to manage its own affairs has been sharply challenged.

The issue between business and the rest of society is clearly drawn, namely, whether management shall be based on experience and evolution, or on theory and revolution. The decision will undoubtedly depend on the quantity and quality of experience used in the near future. Is it possible, for example, to increase the amount of experience available to top management, to broaden the base upon which that experience rests, and to substitute a detailed record of facts for the unreliable evidence of memory? Can we

For publishers' addresses or information regarding articles or books, apply to AMA headquarters.

extend the span of experience to include the combined and correlated achievements of *all* officials of the corporation, both living and dead?

The foundation of experience on which business management rests most certainly *can* be broadened and strengthened by carefully compiling a history of the corporation and the industry in which it operates. But business history can make a still larger contribution to the solution of current business and economic problems. A mature analysis of historical materials reveals those fundamentals that are constant and unchanging for all industries and through all ages; constants that we are continually prone to forget under the pressure of new conditions and unfamiliar emergencies. Historical analysis also charts the force and direction of those confusing tides and cross-currents that make the navigation of a business enterprise so difficult.

Business history as a distinct branch of social science is relatively new, and its significance is not generally appreciated. The distinguishing feature that sets it apart from economic history on the one hand, and from personal eulogy and corporate whitewash on the other, is the emphasis on organization, management, and policy. In preparing a business history of the type under discussion here, the chronological facts are sorted into three distinct patterns. The first pattern shows the development of production, distribution, finance, and human relations, and often reveals a crippling lack of balance among these four major functions. The second pattern shows the anatomical structure of the business. It defines the sources of economic strength in men and money, in mate-

rials and equipment. It traces the network of management and control by which a loose aggregate of wealth and skills is drawn together and focused on a common objective. The third pattern discloses the evolution of business from a simple, family enterprise to the complex organism of the modern corporation which may control the destinies and contentment of many thousands, even millions, of people—and is in turn controlled by their government. The net result of this effort is a record of the total experience of a business enterprise. If competently prepared and intelligently used, it is a corporate asset of incomparable value.

Though business history, along with electronics, is among the more recent additions to the field of science, it has already established a substantial backlog of theory and research. The pioneering has been done by N. S. B. Gras, Isidor Straus Professor of Business History at the Harvard Graduate School of Business Administration since 1917. In that period Professor Gras and a corps of associates and assistants laid a groundwork of research and theory, upon which every science must rest. This work has been summarized for the scholar and the layman in Professor Gras' book, *Business and Capitalism*. From Harvard the work has spread to other universities and has been tried as an administrative tool by commerce and industry. The practical application of business history, or what might be called the engineering branch of the science, is of relatively recent date and today is largely experimental. Some real progress has been made, however, and the scope and direction of the

work are indicated by the following examples.

LABOR RELATIONS

In 1941 Company A faced a serious crisis in its labor relations. The employees had just been organized by the A. F. of L. and were demanding a 30 per cent increase in wages. The company could not afford any such large increase in wages; neither could it afford a prolonged strike in a year of exceptional prosperity.

The general manager made a study of labor relations as set forth in the company history, which had recently been completed. He found that labor relations had been very cordial from the time of the Civil War until 1923, but from 1923 to 1941—the period of his own administration—relations had not been good. Very early in his administration (1924) a disastrous strike of four months' duration had occurred, after which submerged unrest was evidenced by low employee morale.

In the earlier period, according to the history, a direct and frank relationship existed between management and the employees. The executives not only took a keen interest in the working and living conditions of the employees but also tried to give them an understanding of the company's problems and to enlist their support for such measures as company policy might dictate. The attitude of management in this early period is illustrated by a memorandum from the president to the factory manager written during the depression of 1861:

I cannot therefore resist the conclusion that it is my duty as it is the interest of the company to reduce the force of the factory to its *very minimum*. . . . I wish all this done in the most

kind and considerate manner, and every word of interest and sympathy spoken that can alleviate at all so sad a business.

All my feelings are with our people; and it is my duty to the company that compels me to request you will see this done, and done at once.

Good relations were further promoted by the fact that the company had a strong position in the industry and paid premium wages.

Company A lost its competitive advantage during World War I and by 1923 was threatened with bankruptcy. In that year the company was reorganized and a new management took office.

Poor labor relations in the second period, 1923-41, were attributed by the historian to two causes: wage cuts and the arbitrary manner in which the management dealt with employees. The wage cuts were reasonable and necessary to bring wages down to the competitive level in the industry, but the attitude adopted by management served to precipitate and prolong the 1924 strike. The strike ended in a victory for the company, to the extent that operations were resumed at reduced wages, but resentment was bitter and employee morale continued low. "The iron hand of strict discipline," as one employee described it, was a permanent bar to friendly labor relations.

In 1941, acting in the light of his own experience and the broader evidence revealed by the company history, the general manager altered his attitude toward the employees and their representatives. He reverted to the more conciliatory manner of the earlier period but firmly retained all the management prerogatives that characterized every successful regime in the 90 years of the company's history. In 1941 a mutually satisfactory

contract was negotiated with the union, and amicable agreements have been reached promptly in all subsequent collective bargaining to date (1946).

ORGANIZATION AND POLICY

There was constant friction between the sales department and the factory at Company B. The president made the situation worse by frequent changes of policy. In periods of rising business activity, he supported the general sales manager in many requests for new products and the necessary facilities for their manufacture. He also approved plans for expansion of the marketing organization. In times of depression, he leaned heavily toward the desires of the factory manager for fewer products, less service to customers in the way of small manufacturing lots, and general retrenchment. These extreme swings in company policy were attended by informal rearrangements in the top ranks of management which resulted in major shifts of responsibility and authority. These disruptions were in turn transmitted through the lower tiers of management, where they produced bickering, confusion, and waste.

In 1911 the new president decided to bring this state of internal dissension to an end. Accordingly, he moved the office of the general sales manager to the factory and set up operating committees for the prompt settlement of interdepartmental disputes. In announcing the new plan, the president said:

The close contact of the General Sales Manager with the factory heads makes impossible any such breach between the two Grand Divisions of our Company as the past has witnessed. The Plans adopted by each Division and recom-

mended by the various Committees will continue to take into account all sides of difficult questions without prejudice or favor.

This close contact, by virtue of the mixed membership of all Committees, will fit each one of us to be better acquainted with trade conditions and how to cope with them. The study of Efficiency in all directions is bound to benefit us with our policy of Concentration and Specialization. In a word, this plan knits us together into one compact and powerful organization.

In the years following 1911, the president of Company B found it increasingly difficult to maintain the balance of power between the sales department and the factory. Cyclical movements in business activity became more severe. Competition came from an increasing number of sources and had a sharper edge. Customers demanded better service. As the business expanded, financial problems became more difficult. Larger plants and more varied equipment presented new problems in operating efficiency and cost control. All the forces which tended to bias executive judgment and unseat company policy were of greater magnitude, and there was a recurring temptation throughout the organization to use new conditions as an excuse for repeating old errors. Orderly development and balanced control were sacrificed in furthering departmental interests and personal ambitions.

In 1920 a history of Company B was compiled. Prominent among its many uses is the restraining influence it exerts on proponents of change for the sake of change. Above all, this history has created an awareness of the dangers involved in shifts from a buyers' to a sellers' market. It has not wholly removed the tendency to periodic excesses, nor has it fully solved the problem of creating a stable bal-

ance of power among department heads. It does provide, however, a detailed and specific source of information on past policies and programs; on the reasons for adopting them; and on the degree of success or failure that attended each effort. The compiling of this information for a business which produces and sells 10,000 items was a major undertaking, but the usefulness of the record has fully justified its cost.

SALES MANAGEMENT

Company C had reached the end of a technological cycle. Production had progressed from the handicraft stage through primitive factory methods to mass production on semi-automatic machines. Further improvement in production methods was conceivable, but the advance was not likely to provide any major competitive advantage. Distribution had evolved through similar stages. Management wanted to know which of the two fields—production or distribution—offered the greater opportunity; which line of effort would probably yield the greater reward.

An analysis prepared by the company historian revealed that the curve of production cost had clearly reached a point of diminishing returns, while the curve of the cost of distribution was still falling rapidly—which indicated that major economies in distribution could be obtained.

The historian also investigated marketing practice in the industry as a whole. He found many recent developments, among them the following:

- More regard for design and styling
- Larger advertising appropriations, chiefly for radio time and for space in national magazines
- Direct sales to retailers, by-passing the usual wholesale channels
- Greater use of installment credit

Emphasis on public relations and institutional advertising

The evidence presented in the history was disregarded for six years, and the emphasis placed on new mechanical methods and equipment. At the end of that period, a financial reorganization brought a new president to Company C who was much interested in modern sales techniques. Interest in the history was then revived, and the marketing program outlined above was adopted in its entirety. Responsibility for merchandising and distribution was transferred from the general manager to a new executive who was made vice president for sales. Other additions to the sales organization were made as required by the expanded program.

SCOPE OF APPLICATION

Examples of the use of business history could be multiplied endlessly, and every corporation has an unlimited number of problems which are old dilemmas in modern dress. Most of them have been solved before in the course of the company's history, some of them many times. These successes are thrown into relief by the failures which stand as specific warnings against those errors of principle and judgment that seem to recur with surprising regularity in alternate generations.

Looking backward for specific precepts and precedents is only half the story, and the smaller half at that. The highest use to which business history can be put is in appraising the present and the future. The developing patterns of business evolution constitute a systematic basis for the analysis of current movements. They afford a frame of reference in which we may see the present as a child of the past, and a parent of the future. They give a perspective by which the executive may

avoid those emotional errors, either liberal or reactionary, which lead so certainly to failure. History is progress set in order, and the historian is the prophet of orderly change.

Despite its great potential value, there are some things that business history cannot do. One should not expect to take it, like aspirin, to cure a headache; it acts more as a general stimulant. Corporate experience, like individual experience, becomes a part of the executive's subconscious mental reserves, and he uses it instinctively as occasion demands. Like the white line on the concrete highway, it protects him from the impact of onrushing events.

DIFFICULTIES AND DISAPPOINTMENTS

The practical obstacles that impede the preparation and use of business history are formidable, and they limit the effectiveness of every such undertaking, but they do not seem any more serious than the problems which invariably attend the development of any new business technique. The collection and culling of raw material is a slow process at best, requiring patience, experience, and imagination. Gaps in the corporation records must be filled by hook or crook from outside sources of information, both public and private, and this task calls for considerable ingenuity, time and expense. But after these preliminary hazards have been passed, the usefulness of the work depends on the ability of the historian to see the past in terms of the future.

One more hurdle in the path of the business historian deserves a word in passing. In any large corporation he must be prepared to deal with at least one dyed-in-the-wool reactionary. Such a man distrusts all change and appraises every new development in terms of its dangers rather than its opportunities.

He never looks in a history for anything but the stupidities that he knows already. If you try to instruct him, you only humiliate him and make him angry. Do not try to enlighten him; he will only cry out that you insult his beliefs.*

But the most uncompromising member of the old guard can be won over to the defense of business history. His just claim to a place of honor in the corporation's annals is only strengthened by temperate criticism, and he will not ask for more favorable treatment from the author than courtesy requires and candor permits.

CONCLUSION

The routine problem of management is to determine the effect of today's action on profits for the next month, the next year, and the next decade. Each decision in the realm of policy or performance has an inescapable influence on the earnings record and the balance sheet, and that influence must be correctly and clearly foreseen. In solving this problem in clairvoyance, the business executive brings the light of his own experience to bear on the uncertainties of the future. It is the function of the historian to increase the breadth and intensity of that illumination by combining the total experience of the corporation into a significant and useful account.

For big business, the major problem is not so much a matter of profits as of existence itself. The attacks of organized minorities, the corrosive action of public avarice, and the censure born of popular misunderstanding combine to abridge the authority of private management and threaten to extinguish it entirely in favor of socialized control. Fortunately for us, this problem is neither new nor peculiar to western civilization (although it certainly is im-

* Anatole France in the preface to *Penguin Island*.

minent and pressing). It dates back to the earliest beginnings of business. It has been a burning issue for countless centuries in central Asia and the South Pacific. The conflict flares and spreads with each sweeping revolution in the mechanics of production or distribution. It was so when agriculture outmoded the economic system of nomadic herdsmen. It was repeated when

sailing vessels carried the smell of gunpowder and the brilliance of calico to every corner of the world. It is with us now, when the almost limitless wealth of mass production is controlled by the few and coveted by the many. To this age-old struggle between private ownership and socialized control, the historian can make the priceless contribution of balance and perspective.

Executives in the Air

IN the offices of the aircraft division of the Reconstruction Finance Corporation in Washington, it is common to see a travel-worn business man approach a receptionist or a secretary and declare timidly, "I'd like to buy an airplane." The receptionist inquires calmly the size of the plane desired and shunts the buyer off to the proper office. Some of the most eager customers for planes, particularly for small and medium transports, have been private corporations harassed by transportation difficulties. Items on RFC's list of sales to date: 90 14-passenger Lockheed Lodestars; nearly 400 five-place Cessna UC-78's; smaller quantities of Lockheed 12's, Howard UC-70's, Spartan UC-71's, Beechcraft UC-43's. A few new Grumman Widgeons and Beechcraft UC-45's have also been sold direct, and airlines have been busy with the conversion of big Douglas DC-3's for commercial use.

The long list of purchasers of newly released planes includes such diverse concerns as Sinclair Prairie Oil Co., National Automotive Fibres, Inc., Belmont Radio Corporation, General Motors Corporation, Time, Inc., Goodyear Tire & Rubber Company, and the Farmers and Bankers Broadcasting Corporation.

Chief motivation for the purchases is the transportation problem; chief financial stimulus, the tax situation. RFC's second-hand aircraft are not cheap by the time they are put into shape for executive use. Depending on their condition when declared surplus, planes sell from \$5,000 to \$100,000, including the cost of conversion.

Present operating costs are running high. Good pilots for large planes are now paid as much as \$800 per month, and though other operating expenses may decline in the future it is doubted that salaries will follow the trend. Experienced airline pilots will be in great demand by expanding commercial airlines, and pilots whose only flying experience has been in the armed forces are not especially qualified for commercial work. As for operation, flying a Cessna five-place plane for 50 hours per month at 140 miles per hour will probably come to slightly more than \$16,000 per year (including depreciation at 25 per cent), which gives a per-plane-mile figure of slightly over 19 cents—less than 10 cents a mile for each passenger if the plane averages two passengers per trip. Costs of operating other types would be higher.

Unquestionably plane travel is high-cost transportation. Economies of plane ownership cannot be realized, therefore, unless the aircraft are put to extensive use.

—Fortune 10/45

• **ALONG WITH SALARIES** of top three executives, Belden Manufacturing Co., Chicago, in its annual report to stockholders and employees, lists officials' taxes, demonstrating all salaries that glitter are not gold. Thus, the executive who is listed for \$32,650 salary has take-home pay of \$22,078; \$28,690 becomes \$16,692; and, \$18,490 becomes \$12,520. The idea might impress your stockholders and employees, too.

—Modern Industry 4/15/46

Will Higher Prices Bring a Crash?

RISING wages and costs, shortages, and delays step up resistance to price controls. But if prices continue to soar, how long can we go without a crash? Before reaching any decision on price policies, it seems well worth while to look at a previous business period when conditions were similar to those which prevail now.

Perhaps the nearest approach to present conditions occurred in 1920, when we had been at peace for more than a year, after a brief but costly war. Production had not been so completely suspended on civilian goods as it was during World War II. But there existed a shortage of goods, a scarcity of labor, labor troubles, and high prices; and consumers had plenty of money.

Here is a group of 1920 headlines, with marked similarity to 1946 newspaper items:

REDS POURING TROOPS IN
PERSIAN PORTS
BIG WAGES OF WORKMEN PUT
BRAKE ON BUYING OF HOMES
AVERT RAIL STRIKE—22 PER
CENT RAISE IN SIGHT
NEW RAIL PAY CRISIS

Despite all these troubles and rumors of troubles, business went merrily on its way. The newspaper editorial writers were worried about the way workmen were buying silk shirts at \$8.95 each.

Prices were high, and going higher in mid-1920. Early in September, best hogs went for \$17.30, top beef at \$18.25, and lambs at \$14.25. The price of sugar shot up to 31 cents, and everything else seemed proportionately high.

Then began a series of events which slowed buying. Consumers, harassed by high prices of clothing, began wearing overalls to work. A few overall

clubs were formed. Actually few people wore overalls, but it was a feature story in many newspapers and the cause of much conversation. Office workers were urged to bring lunch buckets to work, because it was claimed that hotels and lunchrooms were gouging the workers. Few office workers did carry lunch pails to work but, coupled with the overall story, the news that they were doing it struck a vital nerve in business.

Then on September 22, 1920, Ford prices were reduced as follows: stripped chassis, \$550 to \$395; touring cars, \$577 to \$440; coupes, \$850 to \$775; truck chassis, \$850 to \$745. The Ford price reduction generally appeared on front pages; it was big news. In a few days Franklin automobile prices were cut. Then the avalanche began. Jordan, Overland, and Paige automobiles suffered a price cut. Kissel cars offered a \$600 reduction per car. Federal truck prices were cut.

While these cuts were being announced, Bankers rushed into print to announce that all danger of a panic had passed. But the price cuts continued. On September 24, the *Chicago Tribune* appeared with an eight-column line across the top of the front page, SLASH IN PRICES GOES ON.

And that was putting it mildly. Julius Rosenwald, then president of Sears, Roebuck, announced general price cuts of as much as 30 per cent on mail-order goods. Similar cuts were announced by Montgomery Ward and Butler Brothers. Mr. Rosenwald said: "Foulards, silk linings, taffetas which sold a month ago at \$3.50 to \$4 a yard are now \$2.50 a yard. Dresses which sold a month ago at \$75 to \$80 are now selling at \$50 to \$60. Furniture prices are down 25 per cent."

On the same day, newspapers said steel prices were weak, and cotton was off 100 points. On September 25 Marshall Field & Company cut wholesale gingham prices 30 per cent. Flour was down 35 cents a barrel; woollens dropped 15 to 30 per cent; and wheat broke $11\frac{1}{2}$ to 12 cents a bushel.

On September 25 more front-page headlines announced additional price cuts. Lumber prices dropped 16 to 35 per cent. Ford tires, which had sold in August for \$18.10, dropped to \$13.45; sheeting fell from 27 to 15 cents; percale from 40 to 19 cents; and gingham from 39 to 23 cents.

Bankruptcies increased; wages were cut; mills and factories shut down. Corn fell 32 cents a bushel in less than a week, and the *Commercial and Financial Chronicle*, commenting on business affairs in its November 20 issue, observed that there were "violent declines, far from orderly." By December this same journal announced that "Christmas will be shrouded in gloom."

What happened to the stock market is too painful to mention. War-inflated wages and salaries were slashed brutally.

It is now 10 months after the close of the war in Europe; seven months after the end of the Pacific war. When the lightning struck in 1920, it was one year and 10 months after the close of World War I.

Are we approaching a similar period now? Are we getting along toward the period when the public will revolt and refuse to pay high prices? Or do we have two or three years more? Do we want prices to reach the point where nothing but 30 and 40 per cent slashes at one swoop will correct conditions? Is OPA's attempt to hold the line

worthy of support, even though it does harm certain companies, hold up production at times, and harass business almost beyond endurance at other times?

Is there no alternative between violent reactions, similar to that which occurred in 1920, and some sort of price control? Is there no way to raise prices slightly, enough to cushion the shock of higher wages, higher costs, but hold prices down to the point where inflation will not result in frantic deflation a few months later?

The property owner who complains that wages, maintenance, and other costs are high may overlook the fact that his properties are 100 per cent occupied, when they were once only 70 per cent occupied. The retailer who complains that costs have gone up must remember the big increase in volume he now enjoys. The manufacturer whose wage payments are at an all-time peak must remember that he has not an idle machine in his plant, which may have been 30, 40, or even 50 per cent idle in 1938. The hotel owner complaining and petitioning for higher rates ought not to forget the days of 40 per cent occupancy, as compared with today's 95 to 97 per cent occupancy.

Prices are a paramount problem today, and nothing less than the best judgment of business everywhere can prevent a catastrophe. If sound judgment prevails, if business charges no more for its goods and services than is absolutely necessary, there is a chance that we can escape the disaster that overtook the nation in 1920.

By EUGENE WHITMORE. *American Business*, March, 1946, p. 8:4.

-
- SHOPPERS return one-eighth of the goods they buy in department stores. In other words, according to the Twentieth Century Fund, one day's sales out of eight are a dead loss.

Supersonics—New Tool for Industry

SOUND waves powerful enough to kill, others pitched so high that they cannot be detected by the human ear, are helping industry solve some of its most perplexing problems. Since you'll hear a lot about these waves in the future, you may as well add their names to your vocabulary: *supersonics*, for those waves capable of causing physical, chemical, or biological changes; *ultrasonics*, for vibrations above 20,000 a second, or those you cannot hear.

The most promising industrial application of supersounds lies in what the scientist calls colloid chemistry—that is, the science of matter in a finely dispersed condition (proteins, rubber, smokes, etc.). When treated with sound, the particles that make up smoke, for instance, tend to come together and fall to the ground, leaving the air fresh and clean. Thanks to this discovery, sootless cities are possible in the near future. In the laboratory, supersounds speed up chemical reactions, mix substances that in the past would not join together—oil and water, silver and gold, lead and aluminum. They even change one chemical substance into another—starch into dextrin, water into hydrogen peroxide.

Milk companies have discovered that supersounds passing through milk beat bacteria to death in only a few seconds, compared with about half an hour under ordinary methods of pasteurization. Supersounds can also homogenize milk, breaking up the molecules to leave a fluid of easy digestibility for infants and invalids.

All these developments are overshadowed in significance, however, by the part that supersounds may play in medicine. Scientists at the University of California have succeeded, for example, in killing the deadly germ staphylococcus by subjecting it to vibrations. At Columbia, research is going on to use supersounds in destroying brain tumors. Still experimental, their use to destroy cells may usher in a new technique of surgery without scalpels.

—VERNON E. BRINK in *Forbes* 3/1/46

"Turn the Other Cheek"

PICKETS in the strike against the steel companies were provided with salamanders and coke to burn in them by the management of Inland Steel Company. It was near-zero weather, and the pickets were cold. It is said that company supervisors even started the fires.

The company donated 5,000 paper cups to the strikers and provided an office near the plant for strike headquarters.

Which reminds us of the time workers were striking against the old Nash Motors Company, when C. W. Nash was still the active head of the company. It was a bitter cold day. At noon when Mr. Nash left the office, he saw the pickets shivering outside. He invited them inside the office to get warm, and went back to the entrance guards to tell them to permit the pickets to come inside. As we remember it, this particular strike fell apart a day or two later.

—*American Business* 2/46

Collective Bargaining Explained

IN Pittsburgh they tell of a long-drawn-out collective bargaining session between a small manufacturer and a local labor organization during the recent steel industry strike. The head of the union delegation kept insisting that the manufacturer was not doing collective bargaining.

"Well, if what we are doing right now isn't collective bargaining," demanded the manufacturer, his patience finally exhausted, "just what do you think collective bargaining means?"

"Why," declared the union head in all seriousness, "collective bargaining means we collect."

—*Management Briefs* (Rogers & Slade)

Small Business Fights for Life

CAUGHT in the showdown battles between the big labor leaders and the giant corporations are the GI's of industry, the small manufacturers, whom Washington has overlooked. As unpretentious as enlisted men among the high-ranking industrialists, the small manufacturers are nevertheless the mainstays of the American economy. More than 60 per cent of our national production comes from manufacturing concerns with annual gross sales under \$5,000,000. The huge companies with million-dollar weekly payrolls make the news, but nearly 80 per cent of our industrial labor is employed in plants which have fewer than 1,000 men on the payrolls, and nearly 50 per cent in plants with fewer than 250 employees. To attain our goal of "60 million jobs," these plants must absorb the bulk of increased production.

Yet the postwar expansion programs of these many thousand unpublicized industries are hamstrung by officialdom's self-created labor and reconversion problems. While the labor leaders, industrial giants, and various federal agencies jockey for top spots in the new era of push-button prosperity, the small manufacturers cannot even get the material to make push-buttons. In the three-cornered controversies, they are the only sure losers. Their labor costs rise whenever the powerful unions effect a wage boost; the cost of their raw materials goes up whenever the large corporations break through a price ceiling; and the daily changes in federal rules multiply their clerical work and overhead costs.

Practically no small industrialist has yet been able to go back to a normal 40-hour workweek. With labor still scarce, and with the civilian demand for

consumer goods greatly exceeding available supplies, the small plants continue to work overtime. And the employees in those plants take home just as much money as during the war. Thinking only in terms of industrial giants, however, our labor leaders, newspaper columnists, and Washington spokesmen talk in sweeping generalities about reconversion cutbacks, loss of overtime pay, curtailment of buying power, and unemployment. They make an issue of localized problems and spread unrest and dissatisfaction throughout our industrial structure.

Labor's desire for more money has become an officially inspired right, and the ability of the few industries at the top to absorb increased production costs has become an added burden on the majority of manufacturers. To have a large corporation strikebound is a tragic thing, but the loss to the national economy is small in comparison with a production slowdown throughout the small manufacturing concerns. And that slowdown is inevitable when the small manufacturers lose their key men to higher-paying industries. We do not expect a wave of strikes, even though under certain circumstances our employees have the right to reopen wage discussions once during the contract year. The loyalty of our men is one of the small industrialists' greatest assets. Resignations and the resultant drop in output, not strikes, are our chief concern. We had our men primed to battle reconversion with the same spirit with which they won their share of the war, but we cannot expect them to work 50 hours for us when they can work 40 hours somewhere else for the same amount of money. If only a handful of men are hired away from a small plant, production lags and unit costs

multiply until less efficient men can be trained to fill the breach.

The small manufacturer cannot pay this year's wages out of next year's profits by increasing hourly wages before decreasing unit costs—not if he wants to replace his obsolete machinery, expand his plant capacity, step up his promotion campaign, hire more help, and contribute generally to the "mobilization for abundance" program. But we, the GI's of industry, are competing with our large neighbors for labor, and when they are forced by union demands or federal suasion to pay 10, 20, or 30 per cent more than the going rate for that labor, there is no question about who gets the best men. Either we have to match a competitor's high bid for the best labor, or we are left with dissatisfied, inexperienced employees, rapid labor turnover, increasing inefficiency, and higher unit cost of production. Ironically enough, the large industries have less need for top-quality manual labor in their mass-production lines than the small industries, which require highly skilled workers and low overhead costs to compete successfully with large-scale mechanization.

Any outsider passing a lighted factory during the war probably found it difficult to believe that high profits were not being made. Who would suppose that a plant had to work day and night to maintain normal one-shift production? Yet that was the fix many of us were in. With our young, able-bodied men in the services, and many of the others hired away by the large war industries, we were trying to attain capacity production with the rawest of unskilled labor, and not nearly enough of it. We had to work men 70, 80, and sometimes 90 hours a week, which meant paying time-and-a-half and double-time wages to get much less than prewar man-hours of work done.

Although the small manufacturer was granted some relief through elevations in price ceilings, his increased cost of production wiped out any material gain. Among other factors working against the small manufacturer, the cost of his raw materials—less easily controlled than those of manufactured goods—rose rapidly, and his machinery grew old and inefficient before its time through excessive wear and tear in the hands of inexperienced workers. To stay in business at all, he had to cut to the bone his sales, promotion, and administrative forces. Even then, he fluctuated between profit and loss in direct proportion to the caliber of the labor obtainable in any one week.

A few days after the joyous announcement that Japan had surrendered, the War Manpower Commission made the dire prophecy that there would be five million workers unemployed within three months. And instead of urging employees to accept temporary pay cuts as their contribution toward the reconversion period, Washington encouraged the belief that industry could well afford to carry them through the lean months without any loss of take-home pay.

As soon as the government raised the specter of unemployment and loss of buying power, the opportunists in the upper brackets of organized labor sprang forward with their economic cure-all: the 52-for-40 theory. At the outset, there was no publicized talk of raising wages above wartime standards; the plan was merely to compensate workers for their loss of overtime pay. According to some economists, the only way to maintain purchasing power in the face of continued high living costs and a threatened decrease in man-hours of work was to have industry keep take-home pay at a wartime level.

The 52-for-40 campaign worked out this way in actuality: The man who during the war earned \$52 for 48 hours of labor (a dollar an hour for 40 hours and time-and-a-half thereafter) was supposedly going to be cut to a standard \$40 for 40 hours. The big corporations were urged to make up for the loss of overtime by raising the hourly rate to \$1.30, which would mean paying \$52 for a 40-hour week. But the small manufacturer, still forced by the labor shortage to work his men 48 and more hours a week, would have been trapped in the position of having to pay \$67.60 for 48 man-hours of work, or substantially more than during the war. And the small manufacturer has to pay the going rate, or else.

Speaking as one of the small manufacturers, I must say that we are sick and tired of federal "assistance." We won our share of the war, and we will fight as hard for the peace, but industry needs a free hand—not still more helping hands. We do not want premium payments for increased production, guaranteed markets, government absorption of undue risks, priorities for equipment, and allocation of materials. Difficult as it may be for expeditors to believe, their plans invariably waste the small manufacturer's precious time. The GI's of industry, whose production is so badly needed, would rather take their chances on the open market, where speed and ingenuity pay off.

BY ROBERT E. OUTMAN. *The Atlantic Monthly*, April, 1946, p. 44:5.

America's Export Trade

IT is seldom realized that the United States, without specializing in export, and actually devoting to world trade a very modest percentage of its output, achieved, before the war, the largest export trade of any country in the world.

Our trade exceeded that of Britain by 19 per cent; of Germany by 46 per cent; and of Japan by 300 per cent.

The foundations of future U. S. foreign trade, therefore, are strongly established. They rest upon the prestige of, and the accepted demand for, American products and the dire need that now exists all over the world for an important section of our factory output.

The great emphasis upon industrial, rather than farm products is likewise well defined. In 1940, four-fifths of our exports originated in American factories. It is upon industry that the future of American export trade primarily depends.

That the great opportunities in foreign trade are well understood by business men was indicated at the last annual meeting of the National Foreign Trade Council, where export managers testified to the keen interest on the part of their top executives in the importance of foreign trade to the future of their firms. Export figures show that this interest is being acted upon. Right now—a matter of months after the ending of lend-lease—exports are running at a much higher level than before the war.

Between World Wars I and II, the exported products of many U. S. industries grew to important proportions, and it is apparent that each industry represents a group of firms, each of which benefited to some degree. These industries, and the percentage of their output exported during the year 1937, are listed in the following table:

Industry (or section of industry)	Percentage of production exported
Machine Tools	37%
Typewriters and Parts.....	33%
Abrasives	21%
Motor Trucks, Buses, and Chassis	19%
Tractors and Parts.....	18%
Radios	14%
Files and Saws.....	13%
Textile Machinery	11%
Electric Refrigerators	9%
Agricultural Machinery and Implements	7%
Passenger Automobiles and Chassis	6%
Varnishes and Colors.....	5%
Finished Leather	5%
Storage Batteries	4%
Cotton Manufactures	3%
Industrial Chemicals	2%

These percentages do not fully reflect the export opportunities that actually exist. The radio industry, for example, is 600 per cent larger now than it was before the war, and its 1944 production had an estimated value of \$3,500,000,000. It will readily be seen that even 14 per cent of this production—the prewar percentage exported

—would amount to a far greater total than this percentage represented in the late 'thirties.

In addition to the industries represented on the above list, there are many others whose products achieved world distribution under lend-lease—responsible for shipments totaling \$11,-200,000,000 during 1944—and whose initial experience in supplying wartime necessities has whetted appetites for a share of the peacetime world market.

The principal limiting factor on the amount of exports that the U.S. manufacturer can sell abroad is the ability of other countries to pay for these purchases in American dollars. Strenuous efforts are being made to solve this problem by many means, including governmental agreements. If these are successful, we may anticipate an era of foreign trade on a level far higher than has ever before been achieved.

By ROBERT H. JOHNSTON. *The Depictor* (Edward Stern & Company, Inc.), April, 1946, p. 4:2.

World Trade Aid

THE Commercial Intelligence Unit of the Department of Commerce, offering two major services to business men interested in importing or exporting goods, is virtually a patron saint for many a deal in international trade nowadays. Its first major service is maintaining free want-ads to New Zealanders, Icelanders, Costa Ricans, Liberians, Britishers, Swedes, Turks, and all other foreign folk who want to buy American wares. These are published in ever-increasing volume in the government's *Foreign Commerce Weekly*.

Second, the C.I.U. offers a special investigating service to help American importers and exporters find particular firms abroad with which they can do satisfactory business. For one dollar, it provides a "World Trade Directory Report," giving the lowdown on the financial, commercial, and social status of any foreign firm or business man, from Norrköping to Tasmania.

The want-ads, which the government weekly entitles "New World Trade Leads," reveal a fabulous global appetite for Yankee products. For example, a Bolivian firm is interested in working out—with the maker of a popular American cigarette—an arrangement for manufacture of the same brand of cigarette with the same brand-name under an agreement providing for payment of a royalty. From Morocco comes a bid for seven pre-fabricated bungalows—six for dwellings and one to be used as a cafeteria for the occupants. From Mauritius comes a request for the purchase of and representation for an anti-seasickness remedy and DDT.

Most frequent request from foreign companies is for machinery of all types. Next in popularity are electrical equipment and appliances. Great interest is evi-

dent in textiles and various articles of clothing. Chemicals and automotive equipment rank high on the "wanted" list, as do radios and musical instruments. Also popular are foodstuffs, agricultural equipment and refrigerators.

C.I.U. has files on some 800,000 foreign firms, representing every country in the world except Russia, which has no private firms. The files give detailed data on each foreign firm listed—the kind of goods it handles, what language to use in corresponding with it, the countries it usually deals with, whether it is a corporation or partnership, its sales territory, the size of its capital and volume of business, financial references, and general repute.

Officials of the C.I.U. indicate that the opportunities to export which it offers are overwhelmingly greater than the chances to import.

—A. K. ESTILL in *The Wall Street Journal* 12/10/45

Informative Booklet Welcomes Visitors

THROUGH the use of an informal 8-page booklet, a visitor to the General Luminescent Corporation, Chicago, is immediately made aware of the company's cordial, friendly atmosphere.

When he calls at the receptionist's desk, he hands in his card and mentions the person to whom he would like to speak. A moment later, he is handed a small booklet, titled "Welcome . . ." with his name inscribed on its cover. The suggestion is made that in the few minutes he may have to wait, he might find the little pamphlet of interest.

Within its pages are listed the company's products, the names and positions of "Persons you may wish to see," and available services, such as telephones, time-tables, etc. These are illustrated by informal black-and-white sketches. A letter from the company president welcomes the visitor, and sets forth the organization's friendly policy toward those who call upon it, either as prospective customers or salesmen from other companies. Of particular value to out-of-town visitors is a small map of the Chicago Loop, which points out various places of interest, as well as the location of the General Luminescent Corporation's offices.

—*Factory Management and Maintenance* 2/46

How Army-Navy "E" Awards Were Earned

THE Army-Navy "E" award was granted to 4,283 concerns for outstanding production for the War and Navy Departments. Only 5 per cent of the war plants of this country received the honor. Excellence in quality and quantity of production were two determining factors in the selections. Other factors were: (a) overcoming of production obstacles; (b) low rate of absenteeism; (c) avoidance of work stoppages; (d) maintenance of fair labor standards; (e) training of additional labor forces; (f) effective management; (g) record on accidents, health, sanitation and plant protection; (h) utilization of subcontracting facilities; (i) co-operation between management and labor as it affected production; and (j) conservation of critical and strategic materials.

—*The New York Times* 12/6/45

• **TEN-DOLLAR WEEKLY INCREASES** for white-collar workers will be the main collective bargaining aim of the United Office and Professional Workers of America (C.I.O.) in coming negotiations. This group claims to represent 60,000. Other goals are to be a \$30 weekly minimum for 35 hours of work for any clerical job; a \$50 weekly minimum for all professional, technical, and specialized jobs; weekly instead of monthly pay; guaranteed annual wages in seasonal industries; and equal pay for equal work, without discriminating against women.

—*American Business* 3/46

Office Management

Standards for Business Forms

FORMS are expensive. Time of high-paid men is spent in conceiving them; further time and materials are consumed in designing them; and still other time and materials are expended in reproducing them. In most cases, however, these expenses pale into insignificance when compared to the time spent in using them. For these reasons, it pays to give careful attention all along the line to those points that should be watched to avoid form "evils."

A convenient device to have when business forms are being designed is a check list that will serve to indicate what might be termed standard practice with respect to a number of different features of forms. Here is a list of this kind:

SUGGESTED STANDARDS RELATING TO FORMS

A. As to Identification of Form:

1. Choose shortest possible form name indicative of the purpose of the form; at the same time, avoid ambiguity.
2. Place form name in a conspicuous spot, usually in upper left (to reserve upper right space for filing reference data).
3. Make certain that form indicates its purpose.
4. Place company name or organization unit name in close proximity to form name.
5. Give each form a number; since the number usually becomes the frame of reference, print it in large characters in a conspicuous spot, preferably right above the form name.
6. Place date of latest revision on each form in lower left corner (preferably abbreviated, thus: 8/2/45).
7. Indicate quantity of form blanks reproduced by appropriate symbol or code in lower left corner.

8. Print "Original" on the face of the form if it is the original copy, "Duplicate" if it is the second copy, etc.

9. Number pages of form having more than one page, and place page number in upper right corner; indicate on each page the total number of pages (thus: 1 of 4).

10. Provide for execution signature or signatures in lower right corner of last page of form unless there are compelling reasons to the contrary.

B. As to Filing Reference Data on Form:

1. Provide spaces for entry of all filing reference data in upper right corner.
2. Provide space for entry of date on each form—if possible in upper right close to filing reference data.

C. As to Arrangement Within Body of Form:

1. If form is to be used to take information from or pass information to another form, provide for same sequence of items.
2. If form is to be used to take information from two or more other forms, provide sequence of items to allow all information to be posted from the first form, then from second form, and so on.
3. Use box style wherever possible to conserve space and improve legibility.
4. Provide a reference number or letter for each space to be filled in, and where columns are used, for each column, and where appropriate, for each line of the columnar space.
5. Provide for checking lines or boxes where writing can be saved.
6. Place boxes for checking optional items in front of the respective items to which they apply.
7. Align spaces for tabular material on right-hand side, thus:

Not this:	But this:	Or this:
Age.....	Age.....	Age.....
Height.....	Height.....	Height.....
Sex.....	Sex.....	Sex.....
Weight.....	Weight.....	Weight.....
8. Where possible, allow exact spacing required for entry of information to prevent use of unnecessary words in filling in the form.

9. If form is to be sent from one person to another, provide proper spaces for "to" and "from."

10. Avoid unnecessary horizontal ruling on forms.

11. For forms to be filled in by typewriter, provide horizontal spaces in tenths of inches and vertical spaces in sixths of inches; for forms to be filled in by hand, provide larger spaces; for forms to be filled in by special office equipment, provide spaces required by such equipment.

12. Arrange forms that are to be filled in by typewriter so as to allow maximum efficiency in the use of tabular stops and vertical ratchet movements.

13. Provide for cross-totals to check accuracy of computations where data consists of numbers to be entered in columnar or tabular fashion.

14. Provide for use of window envelopes, where possible, if form is to be mailed.

15. Use space "layout" sheets in designing forms to save time and effort.

16. Consult actual users of form for suggested improvements, additional requirements, and possible elimination before "freezing" the design.

D. As to Instructions for Use of Form:

1. If form is used by a large number of persons and infrequently by some of them, or is used to convey instructions to outsiders, print instructions on form (using front if space is available).

2. If form is used frequently by the same persons, especially where all form space is required for necessary entries, print instructions separately, preferably as a part of the procedure manual or form manual.

3. Print long instructions in columns instead of clear across the page.

E. As to Form Dimensions, Borders, Edges, Bindings, and Backs:

1. Limit dimensions to sizes that will fit the usual office machines and filing equipment, preferably to 8½ by 11 inches or multiples thereof.

2. Provide for dimensions that can be folded conveniently for envelopes, if form is to be mailed or transmitted over considerable distances.

3. Use form border, since this usually gives more horizontal space for the typist's use inside the border line by eliminating need for a margin.

4. Wherever possible, except for the smaller sizes, arrange forms so that the shortest side feeds into the typewriter.

5. Use continuous-feed forms where practicable to save typewriter insertions.

6. Avoid small forms having perforations on one or more edges where this increases difficulty in filing.

7. Leave appropriate margins to allow for the holding of the form by the reproducing equipment.

8. Where form is to be bound, leave appropriate margin at left side, top or bottom.

9. Leave ⅓-inch margin or more at bottom of form to prevent slipping in typewriter.

10. Where forms must be carried around and filled in away from an office, provide for binding of blank forms in convenient-size book.

11. Use pre-inserted, one-time carbon forms where labor is important part of operation in filling in large numbers of forms.

12. Utilize back of form instead of second sheet, if legibility can be retained, and if checking from one sheet to the other is not involved.

13. Print head to head where back of form is utilized and form is to be bound at left; print head to foot where form is to be bound at top or bottom.

F. As to Paper Stock for Form:

1. Reproduce on weight that is most economical: 13 lb.—where 5 or more copies are needed; 16 lb.—where 1-4 copies are needed; 20 lb.—for letterhead forms sent to customers; 24 lb.—for ledgers; 28 lb.—for legal documents; tissue—where many copies are needed.

2. Reproduce on paper with appropriate wearing quality:

Years Kept	Type
1-3	75 per cent sulphite and 25 per cent rag
4-6	100 per cent sulphite
7-10	Half and half
Over 10	100 per cent rag

3. Reproduce on colored paper in cases where colors aid in distinguishing among different forms or different copies of same form.

G. As to Reproduction of Blank Copies of Form:

1. Reproduce by least expensive method that gives adequate quality.

2. Order in economical quantities taking method of reproduction into account.

3. Use "gang" method of offset reproduction where feasible. This can decrease unit costs of forms by as much as 75 per cent of the unit costs reached under other methods ("gang" method makes use of dividing large plate into several forms).

4. Limit reproductions from stencils to small numbers of copies of a form.

5. Limit use of small offset printing machines to reproduction of not more than 5,000 copies of a form; average should be about 1,500 copies.

6. Use letterpress reproduction where ex-

act registration on copies of forms is necessary; bind in "packs" for typing.

H. As to Form Control:

1. Centralize responsibility for form design and control.
2. Cut out non-essential forms and non-essential copies of essential forms.
3. Do not require entry of any unnecessary data on form.
4. Use multiple-purpose forms, where there is no loss in clarity.
5. Take advantage of possibility of execution of one or more related forms or parts

of forms in one operation (example: payroll check, employee earnings statement, payroll tax return, employee ledger card, and cash disbursement journal).

6. Have forms pre-numbered by printer where control over use of each copy is essential.

7. Set up adequate control over pre-numbered forms.

BY GEORGE W. PEAK. *Office Management and Equipment*, March, 1946, p. 33:4.

Survey of Merit-Rating Systems

A SURVEY of the merit-rating policies of 37 companies represented at a recent meeting of the Office Management Association of Chicago reflects a rather wide variety of merit-rating systems in operation and some interesting variations in techniques.

In 10 companies, the rating is based on the opinion of one supervisor; in eight, on the opinions of two or more supervisors; in 20 companies, the opinions of the supervisor are checked by superiors; and in three, the opinions of the supervisors are checked by a special committee.

Interestingly enough, 16 companies' merit rating is prepared in the form of an oral report; three firms use original written reports; seven employ a printed questionnaire of general positive and negative facts in check-list form; 10 companies use a printed form for indicating the degree of proficiency on certain performance factors; two concerns make comparisons of daily tabulated performance to a standard; while two others use regular printed forms which are augmented by comments. Several of these companies use a combination of formal and informal methods, with some individual variations.

Employees are rated annually by five companies, semi-annually by 18, every four months by one company, quarterly by three, monthly by three. Eight others vary the frequency of ratings according to their circumstances.

Asked how employees were informed about the merit-rating system, 14 companies advised that this was done by means of individual counseling; five, by the use of handbooks; four, by mimeographed bulletins. Two companies insert information about merit rating in company house organs, and two make use of group meetings for this purpose. One company brings the details about merit rating to its employees via the bulletin board. Worthy of serious attention is the fact that 17 companies—almost half the number reporting—make no attempt to inform their employees about their merit-rating system.

This situation has undoubtedly affected the attitudes of employees toward merit rating. While 20 companies gave no information as to the disposition of employees toward merit rating, one firm indicated it to be negative; six felt that feeling was divided; and only eight could go on record as saying that the attitudes of employees toward merit rating were noted to be favorable.

—NOMA Forum 2/46

"Last Collection" Warning

"LAST Collection of Mail Has Been Made." Red cards on which this message is printed in black are left in the desk baskets for outgoing mail by messengers making the final afternoon collection in the office.

This system proves valuable in eliminating delay through the carryover of late outgoing mail left on desks. The conspicuous notices in the baskets remind secretaries who may be out of the office when the last collection is made that further letters require outside mailing.

—HERBERT B. ROTH in *Office Management and Equipment* 3/46

Performance Computer for Card-Punch Operators

IN the tabulating department at the main office of Eastman Kodak Company, a complete record of each key-punch operator's output is maintained. Since these operators handle jobs of varying complexity, with resulting variation in output, their individual records show the number of cards punched per hour for any given job.

Until recently, the computation of all the operators' output by job required about one hour each day. However, the introduction of an ingenious computer has reduced the time required for these computations to 15 minutes per day.

The computer consists of two aluminum disks sprayed with a dull black paint and inscribed with scales by means of a stylus. The disks are attached at the center with an eyelet. A thin spring washer permits easy setting of the scales, while holding the disks in accurate register with one another.

About five-eighths of an inch of the lower disk's perimeter is uncovered, and this field is inscribed with a scale of total cards punched. This lower disk has an inner field, inscribed with the rate-per-hour scale which shows through an opening in the upper disk only at the answer point. The upper disk carries a time scale with the opening for reading the answer.

Computations from the scale are made simply by setting the scale of the lower disk (total cards punched) to match the time consumed on the upper disk, and reading the answer in the opening which gives the total output per operator.

Computations can be made rapidly and accurately by inexperienced employees. Since the operators are interested in knowing their rate of output, an extra computer has been made available for their use so they may constantly keep informed on their progress. The principles involved, it is planned, will be applied to other jobs where a fixed method of computation can be used.

—American Business 10/45

Plant Posters Replace Annual Report to Employees

ASERIES of posters, each illustrating a single point in the company's annual report to employees, is being used by The Duplan Corporation, New York, in place of the conventional booklet that gives the entire report at one time.

"Some companies use a booklet style which has the disadvantage of presenting many ideas at one time and in a concentrated dose," says Ralph Gates, of Duplan. "The employee's saturation point is reached soon, and much of the material doesn't register with him."

The company devised a series of newspaper-panel type posters to get the annual information across to the employee without snowing him under or boring him. Each of the 10 posters in the series is displayed for 10 days in the company's plants, so employees will have every opportunity to see it. At the end of the period, the old poster is taken down and replaced with another, illustrating another point in the annual report.

"From our best judgment, employees read the posters because foremen received questions about them," Mr. Gates reports. "Evidently they were believed, because in all eight of our mills, both in the North and South, no one wrote the remarks on them which usually appear if there is disbelief. That is a reasonable record for 5,000 employees. And as a final test, mill managers asked for more."

Success of the Duplan posters is attributed to the lively manner in which ordinarily dry-as-dust statistics are treated. Cartoon treatment with a minimum of copy in large letters, a style familiar to most newspaper readers, makes facts from the annual report both readable and credible.

Mr. Gates believes the employees retain the messages carried by the posters for a much longer period of time than if they were presented in some other form. Not only is each idea easy to grasp, but, posted in conspicuous places in the factories, they are likely to be seen by employees several times during the 10-day periods of display.

—Printers' Ink 3/1/46

The Minimum Wage Problem

RECENT demands that the federal minimum wage rates for men, women, and minors be raised to 65 cents and 75 cents, or \$26 to \$30 for a 40-hour week, pose serious problems. While much is to be said for the soundness of minimum wage legislation, it seems the proponents of these particular rates have lost sight of the basic principle and ignore the effect of minimum wage legislation on rates that are already above the minimum.

Federal regulation of minimum wage rates is a comparatively new development, but a number of states have had long experience with this kind of legislation. At present 26 states, the District of Columbia, Alaska, Hawaii, and Puerto Rico have this type of statute.

While most of the early laws were rendered unconstitutional by the Supreme Court decision in *Adkins v. Children's Hospital* in 1923, the depression of the 30's revived interest in minimum wage legislation. New York took the lead in securing passage of a new law designed to meet the objections of the Supreme Court in the *Adkins* case. Opponents of the New York law argued that the minimum would tend to become the maximum rate. Proponents countered that this would not happen because the minimum would be set for the least skilled and lowest-paid only, and that existing differentials for skills would, of necessity, continue to be recognized. In defense of the relative lowness of the rates set by the various wage boards, it was argued that by raising the minimum even a little, increases would be made voluntarily and also necessarily in the more

skilled occupations in order to maintain existing differentials. And this is exactly what has happened in state after state, industry after industry.

A distinguishing feature of the majority of state laws is that wage orders fix rates for each industry separately. The special problems of each industry are studied and its wage rates analyzed. While the cost of living is one factor considered by the tripartite boards, it is not the sole determinant of the minimum wage. The boards are empowered to take into account the value of the service rendered and the wages paid in the state for work of like or comparable character. The requirement that the boards consider the cost of living has unquestionably made for higher minimum wages, however. But, realistically, the tripartite wage boards have recognized that if you set an ideal minimum which would support the least skilled at a standard of living which met the most desirable social standards, there would be widespread violations of the orders and enormously increased difficulty in enforcement.

In New York State long study of the wages paid in a particular industry is made first. Then a representative wage board must be appointed—and this takes time. The wage board has 60 days in which to report. Then the industrial commissioner has 10 days in which to study and accept or reject the report. Next he must hold hearings throughout the state to give all those affected a chance to approve or object to the recommendations of the wage board. Thereafter, the industrial commissioner may, within 30 days, reject

the recommendations or accept them *in toto*. If he accepts them, the first order is directory—providing only publication of the names of violators as penalty for noncompliance. For three months at least the order remains, in effect, permissive only. After this period it may be made mandatory, with the added penalty of criminal action. Meanwhile, any employer may appeal the order, and its application to him is stayed pending the appeal first to the Board of Standards and Appeals, and then to the state courts. Under every order, including the retail trade, employers have exercised the right to appeal. The restaurant order remained non-compulsory for a period of four years because of the opposition of some employers. The confectionery order did not become mandatory for more than five years; the cleaning and dyeing order required nearly five years.

The often shockingly low rates in the minimum wage orders found in some states, including New York, are the result of a cumbersome, time-consuming, and administratively expensive procedure. It should be revised.

What other lessons are to be learned from the experience of the states? It is significant that the wages set by the states—citing only those orders issued in 1943 or later—are, with few exceptions, substantially lower than the 65-cent minimum proposed by the federal law. And these rates were set by tripartite boards on which representatives of labor, industry, and the public sat. Consider, for example, the rates of \$16 for a 48-hour week in Arizona, \$18 for 40 hours in California, \$17 for 36 hours in Massachusetts, 50 cents an hour or \$24 for a 48-hour week in Nevada, 40 cents an hour in Oregon. In 1944 New York State made mandatory minimum wage rates of 30 cents, 33 cents, 35 cents, and 36 cents, and

even one as low as 20 cents an hour if meals were provided. The highest rate yet proposed in New York is 57½ cents for part-time and 52½ cents for full-time employment in the retail trades. Already impressive opposition has been mustered, which bids fair to make this another case in which there will be long delay before the order can be fully enforced. Some of these state rates are obviously too low today, but the spread between state standards and the proposed 65-cent-75-cent federal rates is still considerable.

Unquestionably the country needs minimum wage legislation to maintain purchasing power, too. But it is questionable whether, even in the face of an increase in living costs, a flat increase from 40 cents to 65 cents throughout the country is wise. Some increase there ought to be, but in determining the amount it must be borne in mind that any increase is bound to affect every other rate of pay now in excess of the 40-cent minimum.

Whether there should be a substantial increase in the minimum which fails to take into account regional differences is another question. These differences do exist—and the differences referred to are not differences in standard of living but in costs of maintaining the same standards.

We must realize, too, that a minimum may be made so high that the law will be more honored in the breach than in the observance, and that the costs of enforcement may be prohibitive. If it is intended to raise our standard of living, let us do so openly and not by indirection through a minimum wage law which was intended only to provide a floor below which wages could not be depressed. A true minimum wage which prevents disastrous wage-cutting is sound economically and socially desirable. But it must

be kept to this purpose—otherwise we may get into the field of government regulation of all wage rates, which will throttle the individual initiative of employers and workers—and this is the

force that has made it possible for this nation to enjoy the highest standard of living in the world.

BY ELINORE M. HERRICK. *The New York Herald Tribune*, March 27, 1946.

Summer Camps for Employees

RECREATION directors are now planning their summer camp programs for 1946. While available facilities, budgets, employee interests, and employment setup necessarily determine the type of camp best fitted for each individual company, employee camps usually fall into one of three general classifications: (1) for the entire family; (2) for men or women employees; and (3) for children of employees.

A noteworthy example of the first type is Camp Isida, operated jointly by R. H. Macy & Co. and L. Bamberger & Co. (Newark, N. J.) for employees, their families, and friends. The camp is located on 466 acres of wooded country, three hours from Newark. Two lodges, joined by an underground passage and a patio, can house 98 people. Two lounges with open fireplaces provide centers for movies, card games, and dancing. Meals are prepared by a camp dietician and served in the main dining room.

Camp Isida is well equipped for sports, with three full-size tennis courts, badminton, volleyball, archery, croquet and horseshoe facilities, and a 250-foot swimming pool. Winter sports include skiing, skating, tobogganing and coasting.

Rates are \$15 per week for employees; \$25 per week for husbands or wives of employees; \$30 per week for friends or relatives of employees; and \$16 per week for children of employees.

A week-end camp, operated for the women employees of Goodyear-Akron, offering complete sports and recreation facilities, and sleeping and dining accommodations within a spacious lodge, costs workers just \$3.50 for a stay from Saturday afternoon 'til late Sunday.

A camp for children of employees is operated by Champion Paper & Fibre Corporation at Hamilton, Ohio. Under the guidance of trained supervisors, campers enjoy a broad activities program with a choice of sports and games specially planned to appeal to children's love of variety. Meals are under the supervision of a trained dietician. Registration costs \$1 per day and is open to any child, age 12 to 18, in the immediate family of a Champion employee.

—*Idea Clinic No. 66* (Industrial Recreation Association)

Making Practical Use of Ideas

AT the Hickok Manufacturing Company, Rochester, N. Y., foremen who took part in a series of conference meetings are doing more than putting into practice what they learned during the discussions. They are filling out a "Supervisory Weekly Progress Sheet," showing the steps they have taken on the points covered in the conferences. These weekly progress sheets are made in duplicate. One copy is kept by the foreman; the other sent to the plant superintendent, who in turn forwards it to the plant educational director who conducted the conferences.

The points covered in the conferences and listed on the "Supervisory Weekly Progress Sheet" include: reduction of indirect labor costs; process improvement; better training of workers; reducing daywork operations; quality improvement; better personnel relations; and, reduction in materials or supplies. The sheet also provides space for "Suggestion" and the writing in of "Special Projects."

The supervisor checks on the sheet which of these points he has concentrated on during the week and then writes out some details of his activities in that direction.

Filling out the "Supervisory Weekly Progress Sheet" is voluntary on the part of Hickok supervisors, but the majority of the men who attended the conferences are participating and find that it keeps them "on their toes."

—*Management Information* 4/15/46

Understanding Union Administration

THE business executive must keep in mind certain significant facts about union administration if he is to understand the union with which he must live. And that understanding is important; it will enable the business man not only to maintain more harmonious labor relations, but also to be more effective in his dealings with union officers. Among the most important aspects of union organization are the make-up of union administration, attainment and tenure of union office, and union officers' salaries. These significant questions will be discussed in the following paragraphs.

Complexity of Organization. A union organization is usually quite complex. There must, of course, be officers to maintain union discipline in the shop and to promote sound labor-management relations. But that is not all. An elaborate staff of officers likewise is required to administer internal union affairs and to manage union finances.

At the peak of the official hierarchy are the general officers—international presidents, secretaries, treasurers, general executive board members, general organizers, and editors of national publications. These are the “commissioned” officers who must formulate general policies and keep the organization unified, and who are responsible for carrying out the mandates of the members. Subordinate to the general officers are a great number of “non-commissioned” officers, selected by the local union or chosen directly by members in the shop; some are full-time union employees, and others are unpaid or only partially paid for performing their union duties.

Local officers are of two kinds: the heads of the local union—president, secretary, local executive board mem-

bers, sergeant-at-arms—and the shop committeemen, or, as often called, shop stewards. The administration of local policy and internal union affairs, as distinct from collective bargaining, is the responsibility of the heads of the local union offices, elected by the local union membership from among its own ranks; these men usually receive only a small salary per term or a small sum for attending union meetings. A fact not generally recognized is that, while top officers in the union organization formulate policies and exert a general influence, the actions of *local* officers often determine the efficiency of the union and the nature of union-management relations.

Attainment and Tenure of Office. In many respects the position of the top officers in the national unions is analogous to that of members of a board of directors of a corporation, with the membership playing a role not unlike that of stockholders. Similar to the top positions in corporations, the chief posts in labor unions are not easily achieved. Places of prestige and power are usually reached only after a long apprenticeship in minor or less important offices. Once elected to top positions, labor union officers are likely to be re-elected annually, and thus to serve for many years. In fact, in most unions the officers are seldom opposed for re-election. Despite a possible impression to the contrary, it is incorrect, however, to assume that top offices in labor unions are reached and held by fraud or oppression. While there are cases in which sharp practices have been charged, these are by no means usual, and even in most of these cases the evidence for the charges is far from conclusive.

It should be remembered, too, that

long tenure of union officers is not necessarily indicative of lack of democracy, but is a normal development common to many other types of organization. It is difficult to oust any office-holder when few members have sufficient prestige or acquaintance throughout the membership to challenge the incumbent. Unless dissatisfaction is very widespread, the challenger will not be able to overcome the incumbent's advantages.

Level of Salaries. The question of union salaries is an important one. In the first place, there is a widespread popular impression that the range of salaries, particularly at the top, is excessively high in relation to the value of the services performed. In the second place, the motivations of union officers have often been questioned as being related almost solely to narrow self-interest and pecuniary gain, and a more precise knowledge of what union officers are actually paid will serve to throw some needed light upon this point. With these thoughts in mind, the author in 1944 made a survey of union practices in regard to salaries of both local and national officers.

An examination of 350 local union constitutions showed that less than half had full-time paid officers. In 84 cases the salaries were stated, with the rate to remain in effect for a given period of time without change. In most cases the salaries were either directly or indirectly related to the earnings rate of the members; they took the form, for example, of the highest regular rate in the trade (usually the higher night rate rather than the day rate), the foremen's rate, or a flat amount which presumably took account of the rates earned by members.

There were 29 instances in which officers received either the going rate in the trade or the foremen's rate. The

remaining 55 salaries are flat amounts per week. In this group the median salary is \$75 per week; only 21 out of the 55, or 38 per cent of the salaries, are above \$75 per week, and only 10 or 18 per cent are \$100 or more. As a matter of fact, for purposes of comparison it would be proper to include most of those which pay local officers the regular or foremen's rate in the group below \$75 per week, since only rarely, if at all, do the building trades, printing trades, and street railways pay rates higher than this. In other words, the percentage of those receiving more than \$75 per week, or for that matter more than \$100 per week, would be even lower than the figures cited.

It is obvious that even in those cases where local union officers are on a fully paid basis, one cannot say that their salaries are very high; at least they are only a little, if at all, above the earnings of the members whom they are called upon to lead.

To determine the salaries of *national* officers, general organizers, and executive board members, the salaries of 121 representative national union executives were studied. Twenty-two out of 37, or 59 per cent, of the C.I.O. national officers studied are paid below \$4,500 per year, while in the A.F.L. only 15 out of 70, or 21 per cent of the officers studied, are below \$4,500 per year. Only two out of 37 C.I.O. officers or 7 per cent, receive more than \$10,000 yearly. Out of 71 officers in the A.F.L., seven receive above \$10,500, with the highest, the general secretary of the teamsters' union, receiving \$30,000. The officers in unions affiliated with the A.F.L. are paid, in general, a higher rate than the unions affiliated with the C.I.O.; the same holds true of A.F.L. officers compared with the officers of independent unions.

In the case of union presidents, the

range of yearly salaries is from \$2,400 per year, received by the president of the United Stone and Allied Products Workers of America, to \$30,000 paid to the head of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America.

Of the salaries paid to the heads of unions affiliated with the C.I.O., 76 per cent are below \$7,500, compared with 48 per cent of the salaries of heads of A.F.L. unions.

Several significant facts stand out as result of an examination of administrative salaries: (1) The A.F.L. top salaries are clearly higher than those of the C.I.O. or independent unions. There is generally little ground for relating the degree of union aggressiveness, which tends to be higher for the newer C.I.O. unions, with the rate of remuneration. (2) Whereas salaries of local union officers are related to earnings in the trade, the remuneration of general officers is usually far above that level. Sometimes the salary seems

to have more to do with the size of the union. It is almost impossible, however, to work out a satisfactory correlation between the size of the union and the salaries of the union heads, for the presidents of several of the largest unions receive only between \$9,000 and \$12,500. (3) There is likewise little correlation between top salaries and the degree of skill of the membership's trade. The head of the A.F.L. longshoremen's union is one of the highest paid in the labor movement, and his constituents are neither the most skilled nor among the best paid. On the other hand, the machinist's union, which has over 500,000 skilled members, pays its president only \$8,500. (4) In any event, the popular impressions about remuneration received by labor leaders *as a class* clearly are not well founded. In particular, considering the great responsibility that rests upon them, the concept of fabulous earnings seems a gross exaggeration.

BY PHILIP TAFT. *Harvard Business Review*, Winter, 1946, p. 245:13.

U.S.E.S. Aptitude Tests Available

THE United States Employment Service has agreed to release to private employers, as well as non-profit vocational guidance and placement agencies, certain of its occupational tests, including aptitude tests and trade tests heretofore not made available for outside use. Conditions under which the tests will be released are:

When it is determined by a responsible U.S.E.S. official that the tests would perform a useful function.

When the local U.S.E.S. office is unable to furnish testing service on its own to the extent needed.

When appropriately trained U.S.E.S. staff members are available to introduce the tests and follow up on their use.

When the borrowing organization agrees to cooperate with the U.S.E.S. in determining the validity of the tests for the organization's own use in hiring and testing employees.

"Oral Trade Questions," Volume I and supplements, are restricted. Under no circumstances will the tests be loaned until an authorized company or institution official executes a written agreement with the U.S.E.S. Regional Director which, among other things, provides that the organization will not "duplicate, sell, or otherwise release the United States Employment Service tests."

—*New Items* (Ebasco Services, Inc.) 3/46

A Comprehensive Company Training Program

FORD Motor Co. has installed a broadly expanded training program based on the belief that improved morale and increased personnel efficiency resulting from additional knowledge pay off in profits and better products.

The newly centralized training department groups six general types of instruction and covers employee, supervisory, and professional fields.

It is in the professional training division that the Ford educational program breaks away from orthodox factory schools in the establishment of a novel "five-year plan" for training executives.

A group of about 25 men have been put into a special class which will complete its work late in 1950. The men will study all of Ford's seven functional operating divisions: manufacturing, sales and advertising, purchasing, engineering, foreign operations, industrial relations, and accounting, auditing, and finance.

After their long development period, they will be assigned either to departments that ask for them, or according to their own preferences. Their familiarity with the firm's operations and policies is expected to make them a likely crop of potential high-bracket company officials.

The original group was chosen from among Ford employees by recommendation of top officials. Additional groups will be put in training later.

Beyond that, the training department stands by to answer calls for help. Recently one of the company's major executives said he needed to know more about public speaking to fill some new assignments. A speech course was arranged for him, and many others are also attending it.

A department executive can arrange training for any of his people in whatever subject he deems necessary. If, for instance, the export division wants to familiarize people being sent abroad with the language, national economics, and history of their new base of operations, the training department will arrange the desired courses.

Other work done by the department comes closer to the orthodox pattern. Employee training covers the instruction of carefully chosen unskilled workers to meet immediate demands for semi-skilled workers and apprenticeship candidates. The course covers 15 weeks and is intended to teach a specific job.

Also in this category is apprentice training work, spread over a four-year period, through which a trade is taught by a skilled worker. The apprentice is paid while in training, his production partially compensating for the cost of his education.

A supervisory training section in the school provides essential information and administers programs for preforemen, foremen, and all other supervisors. This instruction, like Ford's employee training, is typical of many factories.

The Ford training department is staffed by 275 instructors, bolstered by consultants on call from Detroit's Wayne University and the nearby University of Michigan. Classes are held either at the Ford plant or in the universities' classrooms.

—*Business Week* 4/13/46

Revamping Grievance Procedure

ALMOST unnoticed in the recent strike settlements were the revisions effected in grievance procedures. Reference to company facts and figures reflected in grievance records enabled employers to get a reliable slant on just how grievance machinery has been working.

Prepare for bargaining on this point by getting the answers to these questions:

1. How much time did stewards spend handling grievances during the year?
2. Was production seriously hampered by key men going off to handle their duties as stewards?
3. How long did it take to settle the average grievance?
4. Did wildcat strikes result from unresolved grievances?
5. How many cases were taken to arbitration?
6. How much was paid out in back pay awards?

In some instances, the answers will indicate either major trouble spots in the plant to be cleared up by changes in supervision or some general abuses to be remedied by changes in the contract.

—*Labor Coordinator Bulletin* (Research Institute of America) 4/18/46

A Job-Rotation Plan That Works

EQUITABLE job rotation in certain production departments offers a real opportunity for improved working conditions by lifting worker morale, removing the humdrum monotony of doing the same job day in and day out, and eliminating even a suspicion of the old bugaboo, "favoritism." An outspoken worker, irked by seeing flagrant displays of favoritism, was instrumental in the establishment of a job-rotation system which is working out better than even the most optimistic observer anticipated.

The plan had its inception in the 24-man die-casting department of an Ohio company. An office executive was in the department discussing a routine matter with the supervisor when the disgruntled employee sounded off on the subject of the department's two favored operators.

"The men in this department aren't getting a square deal," he protested. "All the good jobs go to those two guys on the two end machines. They get all the gravy. The supervisor's been playing favorites and it isn't right. One is the supervisor's cousin and the other is his fishing partner. Any one of us can turn out their work just as well, but we never get the opportunity."

To save face in the presence of the executive, and believing he could call the disgruntled worker's bluff, the supervisor assigned him to a job normally turned out on one of the two end machines. Each of the machines operated by the two favored men averaged 275 castings an hour.

The spokesman's machine was adjusted with the proper die and he began working. At the end of the first hour, he had produced 190 castings. In the next hour, his output increased

to 230 castings. As he continued to get the feel of the job, he raised the hourly output to 300 castings and maintained production at that level. It was a convincing demonstration.

A revolving job system was inaugurated in the company's die-casting department in August, 1944, and continues in operation today. All die-casting jobs in the department have been classified according to the degree of physical exertion required, mental concentration, speed of production, and similar factors. Each man is given the opportunity to develop his productive ability on each job as it comes up in the line of rotation.

Department records indicate that production has increased 10 per cent over-all, waste has decreased more than 50 per cent, and management-employee relations have improved substantially. These figures are convincing proof that job-rotation plans merit consideration.

Working conditions among men in a department sometimes resolve into civil wars. Day after day a man works on a tough job while the fellow next to him earns as much or more money at an easier task. The feelings of mistreatment grow from day to day and eventually result in open dislike between workers. This leads to dissatisfaction, first with the supervisor and later with the top brackets of management. Productive cooperation is relegated to the scrap heap, and is replaced by bickering.

When each man revolves around all the jobs in his field, he has an equal opportunity to earn as much as he can produce. The fact that one man can produce more efficiently and thus make more money in a given job doesn't

antagonize the man next to him; it presents a challenge to improve his work and thus reap the fruits of more pay.

The work-rotation system introduced in the die-casting department has contributed immeasurably to overcoming worker fatigue. Increased production bears this out. Furthermore, the rotating workers take more interest in production problems and cooperate in ironing them out. They realize that one worker's problem today might be theirs tomorrow.

Under the plan, the department elects a committee to classify the various jobs. If warranted, reclassifications are made from time to time. If differences arise, the validity of the classifications is decided by popular vote. A chart bearing the names of the workers, the different job classifications, and the number of hours spent on each job is maintained.

Under each classification and after the name of each worker on the chart are boxes in which are marked the number of days each man worked during the week on each job classification. A diagonal line separates each box into two parts. Full days worked on a particular job are marked in the upper half of the box, and split days are noted in the lower half.

The next rows of columns show accumulated totals for each man under each classification. These totals, calculated twice a month, indicate immediately the number of days each man has spent on any of the classifications. The last four columns in the chart list the total number of full and split days worked; the total days or aggregate of full and split days; the total hours; and the average bonus earned by each man per hour. The bonus, incidentally, is paid in addition to the base hourly rate. Overtime is not recorded on the chart but could be added easily.

The chart is kept in the department and the totals are figured every two weeks so that each worker, supervisor, or executive can see the situation at a glance. Discrimination of any kind becomes obvious. The supervisor rotates the jobs and it is his responsibility to do so with fairness and good judgment. His actions are reflected in the chart.

Other departments, such as assembly, might not lend themselves completely to a job-rotation system, but almost invariably some arrangement can be worked out which will pay gratifying dividends.

BY AL WOOD AND M. L. OKUN.
American Machinist, May 9, 1946, p. 114:2.

Salary Trends in Federal Employment

IN July, 1945, Federal employees in classified positions received their first general increase in base annual pay since 1928. The increases ranged from 20 per cent at the lower salary levels to 9 per cent at the upper levels and averaged 15.9 per cent for the group. As a result of payment for overtime—which was granted beginning December, 1942—and, to a small extent, as a result of shifts in the occupational distribution of Federal employment occasioned by the war, the average Federal salary rose 25.7 per cent from January, 1941, to December, 1944. This was slightly less than the increase in consumer prices and a great deal less than the increases in manufacturing earnings. Two-thirds of the Federal employees in classified positions received base salaries of less than \$2,000 in December, 1944; after the new rates became effective in July, 1945, half received less than that amount.

—*Monthly Labor Review* 3/46

Statistics in Personnel Administration

SOME of the most important operations of the personnel department are accomplished only with the aid of factual information gleaned from appropriate company records—such as production records, quit and discharge rates, labor market indexes, costs of distribution and overhead, wage and salary rates, etc. The understanding and most effective use of these records can often be accomplished through statistical analysis. Arithmetic and even cost accounting methods can sometimes be uneconomical, and may result in erroneous and misleading conclusions. Statistical treatment of data, on the other hand, eliminates unproductive effort, points up appropriate interpretations to be made from records, and defines the degree of confidence that can rightly be placed in arithmetic and cost accounting figures.

Personnel problems should not be determined by arbitrary opinion that problems exist, but by an analysis of facts indicating such problems. However, it is not uncommon to find personnel departments strenuously trying to find and correct causes of turnover, quits, or absenteeism, or to institute new placement or training programs in the absence of any problem in these areas.

As an example, one plant of a company showed what appeared to be a quit rate much in excess of its other plant. The first reaction of the company was to call this to the attention of the plant manager and institute a program to reduce quits. However, simple statistical analysis of the quit rates showed that the plant with a high quit rate also had a high proportion of female hourly workers, a group which is characteristically higher in turnover than other employees. When quit

rates were adjusted for proportions of hourly and salary male and female workers, the difference in quit rates between the plants became insignificant.

The role of statistics in the formulation of good industrial wage and salary structures is important. Any skilled wage and salary administrator is aware of the dependence of this work on statistical know-how. Within personnel circles, it is not uncommon to hear tales about losses of thousands of dollars through unwise manipulation of wage curves by untrained wage administrators. One can probably infer that many such cases are not even recognized. Sound company wage structures are built around factual information concerning industry, area, and company practices. Statistical measures of relationship are important tools in the intelligent interpretation of this information.

The field of job evaluation is too little understood today. Much of its technique is of the type that should require multiple correlation applications. This is not to imply that any magic formulae can be developed through such applications. Rather there is need for practical interpretation of information gained through statistical analysis. Merit rating is a closely allied field of personnel operations which continues to confuse its users with problems that are properly in the bailiwick of statistics.

Training is another phase of personnel operations which requires a better understanding through statistical examinations of its data. Few companies today understand what is being accomplished through training. Industry could borrow from our educational procedures in clearly formulating objectives of training and means of measur-

ing the achievement of those objectives. As a matter of fact, industrial objectives should be easier to formulate and measure since they are chiefly in terms of specific skills and knowledge. The need for industrial training should be determined, as far as possible, through examination of such records as those covering graded quality inspections, quantity of production, learning times and curves, and other objective measures of knowledge and skills.

Evaluation of personnel practices lends itself readily to statistical applications. In fact, such evaluation implies some method of quantitative measurement. Personnel, dealing as it does with the elusive human factor, is inclined to assign the job of self-measurement to the realm of impossibility. However, personnel work receives its direction and operates in terms of certain types of quantitative records. Consequently, its appraisal can be made in terms of resulting modification of those records. For example, if personnel research reveals that workers on a job vary greatly in the quantity they produce, and selection and training programs are operating to bring the production level up to that of the best workers, then an appraisal of the personnel program should be made in terms of measurable amounts of increased production against measurable additional expenses for the selection and training programs.

On the surface it seems that such evaluations are largely accomplished by good cost accounting, but this is not entirely true. The cost accounting can be no more reliable than the arithmetic figures given the cost accountant. Neither the best arithmetic measures nor the best techniques of cost accounting provide an adequate picture. The application of statistical analysis to

these figures, however, gives them significance.

Suppose, for example, that figures showed the average daily production per worker, after the selection and training program has operated for a year, to be 100 units higher than before. Suppose also that careful cost accounting showed the net monetary return, as a result, to be \$4,000 in excess of the cost of the program. The immediate reaction is that the personnel program has been profitable and justifies continuance.

Now turn these figures over to a statistician. His first reaction would probably be to test the significance of the difference of 100 units per day per worker. That is, if the workers usually produced a large number such as 2,000 units a day and varied considerably from day to day, the difference might be a chance occurrence. The statistics show that this difference could have occurred by pure chance without any personnel program, indicating that continued production at the higher rate is not probable. In this case, instead of a \$4,000 yearly savings there would be only the loss of the personnel program expense, which obviously would not justify continuation. Furthermore, even if the difference were significant, it is possible that other causal factors are present.

Statistically the influence of other factors can be measured and the effect of the amount of increased production can be defined. Then the figures can be handed again to the cost accountant and evaluated. Perhaps the personnel program brought about a small change which did not justify its expense. Or, on the other hand, in addition to saving \$4,000, the personnel program may have offset the effects of an increasingly poorer grade of supervision (for

example, under war conditions) and really saved \$8,000 for the year.

The cost accountant has no way of determining this. Most records he works with have a statistical reliability which should be determined, and in the personnel field most results measured are influenced by many variables which should be considered.

In summarizing, the evaluation process works as follows: (1) Arithmetic figures summarize personnel records and give the basis for evaluation; (2) statistics lend meaning to the arithmetic figures; and (3) cost accounting converts the figures and interpretation into dollars and cents.

The need for better and more factual information and increased precision of statistical inferences based upon this information is obviously important in all phases of business administration. Personnel management is not exempt from this need. Under the guidance of substantial facts, accompanied by professional analysis, the personnel executive is able to establish his worth as administrator of an integrated program of personnel administration.

By D. A. STEWART and D. J. BOLANOVICH. *Personnel Journal*, February, 1946, p. 282:7.

How Many Personnel Workers?

THE inadvisability of seeking a "standard" ratio between the total number of employees in a company and the number of individuals assigned to personnel work is brought out in a recent study by The Conference Board. Individual company situations, it is shown, vary too greatly, and their personnel programs differ in content too much to develop a measure of general application.

The Caterpillar Tractor Company, with 20,000 employees, has a personnel staff of nearly 600. This number, however, includes 265 in the Safety and Sanitation Division and 180 in the Restaurant Division—divisions which in some companies are not included in the personnel budget. The 48 persons in this company's Medical Division represent an unusually well-developed health program.

The Armstrong Cork Company, with 15,000 employees, has a total of 190 in Personnel Administration, but this includes 115 in food service and 40 who work in the employees' store.

Even limiting the comparison to personnel administrators and their assistants in central personnel organizations, it is revealed that no generally applicable ratios can be developed. General Foods Corporation, for example, with 13,000 employees, has 31 personnel administrators and assistants on the personnel staff which serves at the corporate level. Owens-Illinois Glass Company, with 19,000 employees, has 20. But the individual plants of Owens-Illinois are larger than the local units of General Foods, and the total numbers in personnel administration at the plant level in the former is larger than in the case of General Foods. Moreover, the two companies' programs, while similar in many respects, have significant differences that affect the number of persons needed for their administration.

—The Conference Board Management Record 1/46

State Labor Legislation

OF the 44 state legislatures which met in regular session in 1945, one state passed an act for the protection of migrant workers in agriculture, and one outlawed closed and union shops. A number legislated on various aspects of wages—minimum wages, equal pay, wage payment and collection, and prevailing wage rates—and several dealt with measures to prevent discrimination in employment. Thirteen established funds for compensating second injuries, four enacted occupational-disease laws, and 19 increased the maximum benefits payable for industrial injuries.

—Monthly Labor Review 2/46

Requirements of a Successful Incentive Plan

UNDER the pressure of war demands, the incentive method of wage payment as a spur to production was rediscovered by industry. Now, with reconversion under way, incentives are again being considered as a means toward more efficient use of labor and lower costs. They have an important postwar job—if they are used effectively.

The first requirement of an incentive plan is a good production standard, but a production standard is good only when it is established and used under standard conditions. It does not matter how carefully a time study is taken or how exact the time study technique may be. If the conditions under which the standard is expected to apply are not controlled so that they remain as they were when the time study was taken, the production standard is meaningless.

If an incentive wage payment plan is to operate successfully, hourly base rates for incentive workers, equal to hourly base rates for similar jobs, should be guaranteed. If this base wage structure is sound, average hourly earnings, or any related average earnings, need not be guaranteed to any degree and, as a matter of fact, *should not* be guaranteed.

The plan should regulate compensation in direct ratio to the increased output. If there is 1 per cent increase in production, 1 per cent greater earnings should be realized. It is important that possible bonus earnings be large enough to spur the workers to produce to their full capacity.

A clear-cut policy specifying when a standard is to be changed must be in existence and be rigidly adhered to. Much has been said about the morale-

impairing wage-cutting practices of the past. Now management must be doubly certain that all rate changes are above any suspicion in this regard.

A complete wage policy should be in existence. Such a policy, to be of best service, should be written before an incentive wage payment plan is inaugurated. If it is written after the installation, it may consist of compromises reached after a series of grievances has been decided.

The plan should be easy to understand, and the employee should be able to calculate his earnings without any difficulty. It is extremely important that the worker feel he is being paid his full share for the increased production he turns out.

Any necessary temporary adjustments in production standards should be made by the time study man, rather than the foreman or time clerk. Under practical shop conditions, some adjustments for sub-standard conditions, tools, set-ups, etc., are necessary. However, such adjusting should not be uncontrolled.

Finally, the plan must be constantly policed and maintained in good working order. Failure to fulfill this last requirement is responsible for more casualties among incentive plans than any other shortcoming.

The industrial engineer who is responsible for the incentive plan must be well grounded in all phases of management to be able to examine all the functions outside the department which determine production standards and which may affect the plan's operation. For example, good shop routings, which may originate in processing or planning or product engineering, are needed. These routings must specify

precisely what operations are to be performed; what machines are to be used; the tools required; the classification of labor to be used; and must contain enough description to insure that all phases of the operation will be performed.

A sound base wage structure is necessary. If a sound wage structure is not in existence, job evaluation and proper classification are first necessary, because if there is any imbalance in the base wage at the outset, incentive earnings will only increase that imbalance.

Effective production planning and scheduling must be in operation. A production standard is not always equally applicable to very long or very short production runs. Broken lots in a job shop arrangement and too frequent set-ups interfere with bonus earnings and create grievances. Production control must maintain a uniform flow of work through the shop, according to the sequence of operations specified by the routings.

The product engineer must issue and keep current complete bills of material. Whenever such bills are not available, changes in assembly, changes in design, and elimination of parts in the assembly very often go unnoticed and are not reflected in new production standards. Accurate blueprints must also be available. Tolerances, finishes, amount of soldering or welding, stitches per inch, etc., specified by the blueprints, affect production standards.

Good set-up and job instruction sheets are necessary. One union specifies that: "After a job has been time studied, complete job instructions should be written out, including a statement regarding the necessary machines, tools, and materials. When the job is handed out, the employee should be given a card which contains the above information and the rate for the job."

Tool control is necessary because (1) substitute tools need temporary standards which are canceled when the specified tool is returned; (2) each time the job is set up the same tools should be used; and (3) improved tooling requires re-study and the setting of a new production standard.

Top management must understand the potentialities as well as the limitations of the incentive method of wage payment and be thoroughly enough versed in its uses to give the industrial engineer a comprehensive philosophy. Upon this the engineer may build a wage policy to support the industrial engineering practices and to serve as a set of rules and regulations by which both labor and management will abide.

This policy should give the reasons for the existence of an incentive plan. First, it must describe the type of incentive to be used. Next, it must reveal in some detail the manner in which the standards will be established, the production reported, and the earning calculated.

Certainly the production standards should be based on correctly executed time studies synthesized into standard data wherever possible. Past performances are absolutely untrustworthy because production standards, correctly established, may be as much as 300 per cent of past performance.

The policy should indicate the time study technique to be used, and some effort should be devoted to making it understandable to the labor group. What is not understood is usually feared. There should be some discussion of the observations to be made, the manner in which allowances are determined, the method of bringing actual performance to the average performance level, the use of standard data in establishing standards, and the manner

of calculating the production standards to include all the allowances.

The bases for change of standards should be precisely described. All expected questions regarding permanent and temporary standards should be answered as completely as possible, and the procedure to be followed when a standard is challenged should be outlined. The rules governing transfers of employees to new jobs with different base rates must also be specifically indicated.

Failure of top management to hire personnel for the industrial engineering department in sufficient numbers and with proper background to maintain an incentive wage payment plan inevitably causes its collapse, no matter how well the plan was initially in-

stalled. Unless management will maintain the necessary time study staff, no attempt should be made to install an incentive wage payment plan.

Finally, the incentive plan must be thoroughly understood by top management, by workers, by all the intermediary groups such as product engineers, tool designers, inspectors, the production manager, the superintendent, and foremen. In many cases where a good incentive plan has "fizzled" it has been found that workers did not understand it, and managers and supervisors were themselves too hazy about the plan to make its workings clear.

By E. A. CYROL. *Mill & Factory*, January, 1946, p. 114:4.

Best Subjects for Employee Publications

IN a reconversion survey of members of the National Council of Industrial Editors, 11 topics were listed, and editors were asked to rate them in the order of their value as subjects to be used postwar. Resulting rating: (1) personal stories and items on employees and their activities; (2) factual news of company products, services, and developments; (3) stories about company veterans and company service awards; (4) rehabilitation of employees released from the Army and Navy; (5) safety promotion material and safety illustrations; (6) sponsoring and promoting employee suggestion systems; (7) stories about postwar living, conveniences, and opportunities; (8) biographical matter of company officials and executives; (9) humor in form of jokes, anecdotes, and cartoons; (10) Government material on inflation control and bond sales; (11) news about activities of labor-management committees. Had external publications expressed their preferences separately, the order would probably be somewhat different.

—Stat 12/45

Expenditures and Savings of City Families

IN 1944, it took an income of \$1,950, after payment of taxes, for the typical city family of two or more persons to "break even." Such families, averaging three persons in size, lived very modestly, spending barely 22 cents per meal per person, \$30 per month for housing, fuel, light, and refrigeration. To buy war bonds and pay on life insurance, they went into debt or drew on previous savings. A fourth of these families depended on more than one earner. For one person to provide an income of \$1,950 after taxes, or a total of \$2,070, steady work was required, 40 hours a week for 50 weeks, at \$1.03½ per hour. Almost a fourth of all city families of two or more received net incomes below \$1,950. Thus, although family incomes reached their highest level in history in 1944, this did not mean sizable incomes for all. Savings, including war bonds, averaged 10 per cent of income only for families receiving \$3,000 or more after taxes.

—Monthly Labor Review 1/46

Production Management

How Productive Is Labor?

WHAT happened to the productivity of labor during the war? This question, perhaps the most important matter facing industry, labor, and government in determining wage-price relationships, has given rise to an interminable argument since hostilities ended; but no clear answer has emerged. Business officials have asserted that man-hour output declined in the war years, or at best stood still. Union leaders, pointing to the munitions industries, declared that productivity advanced sharply. Government economists, in their reports, have succeeded in giving ammunition to both schools of thought.

The problem is basic, for if wages are raised without a corresponding increase in productivity, prices must be increased or profits must be squeezed. Under those conditions higher prices mean a strong boost for inflation, while decreased profits lower incentives to new investment in productive equipment. On the other hand, if productivity has increased during the war, some wage increases could be given by industry without raising prices.

A clue to the productivity question—though a scanty and inadequate one—has been provided by studies of the Bureau of Labor Statistics. The Bureau has studied 24 non-war manufacturing industries and has computed indexes of man-hour output for the years from 1939 through 1944. For the entire group productivity advanced, on the average, at about the normal peacetime rate from 1939 to 1941. In the succeeding three years the composite index showed that man-hour output practically stood still.

The BLS has warned that these statistics should not be considered representative of all manufacturing industries, or even all civilian products manufacturing. They are, however, the best available data on this highly controversial subject.

After three war years, about half of the industries had higher man-hour output than in 1939; the other half showed declines. The ice cream industry, for example, exhibited a great advance, as did rayon manufacturing; but cement makers and newspaper publishers were not so fortunate. It is significant, however, that all these industries were able to increase productivity between 1939 and 1941. The great divergencies became apparent only after the war started. And the war years were hardly propitious ones for boosting man-hour output in non-war manufacturing industries. Experienced workers were being drafted or lured away by higher wages in war plants; employee turnover increased alarmingly; the proportions of women, the aged, and the handicapped in the labor force increased greatly; new equipment was unavailable; old machines were operated to capacity with frequent breakdowns, and repair parts were hard to get.

Another important conclusion that may be reached from study of the BLS figures is that wage increases according to a "pattern"—for various types of industry or even for individual firms within the same industry—make little sense. Uniform advances in wages presuppose uniform increases in productivity, other factors remaining equal; and nothing is more obvious than

the irregularity of man-hour output changes during the war. If one assumes, for example, that both the cement and ice cream industries were paying appropriate wages in 1939, it might be concluded that the ice cream makers could pay sharply higher wages at present while the cement firms would be justified in lowering wage scales.

The basic metal producing and fabricating industries, however, were not included in the BLS studies, because in most cases the nature of their products changed so radically after 1941 that comparisons with prewar productivity were useless. And it is in these industries that much of the current debate over man-hour output is taking place. One automobile manufacturer has released statistics on costs and production-hours of the company's most popular passenger car model, indicating that the vehicle, in 1941, took 87 hours to build. In 1942, the same car required 102 hours, and in November, 1945, manufacturing took 128 hours. This would show a decrease in efficiency, between 1941 and 1945, of more than 47 per cent.

On the other hand, W. D. Evans, chief of the productivity and technological development division of BLS, recently expressed the need for caution "concerning any statements or statistics on productivity in reconverted industries which may be made within the next few months. Until full capacity operations are reached," he said, "a large amount of labor will be needed without any correspondingly large increase in finished goods. No comparison should properly be made with prewar performance in these industries until normal utilization of capacity has been reached."

While some business spokesmen have been comparing prewar levels of productivity, when operations were at

capacity or nearly so, with postwar man-hour output, when reconversion was taking place, material shortages were hampering production, and when total output was only a tiny fraction of normal, labor leaders argue that productivity has vastly increased during the war years and that it will continue to do so in the immediate future. The latter claims seem to be as biased as the former.

The labor union case is based on two principal premises: the fact that productivity leaped upward during the war in munitions industries, and the great technological advances made by industry in the war years. Discussing the first argument, one well-known firm of management engineers said: "Productivity per man-hour did increase almost 50 per cent on the average in war industries, but this increase is measured against a lower base than would apply to civilian goods industries, and the increase was due mainly to the size of government orders, to the development of mass production methods, and to the training of workers who, at the beginning, were largely untrained for the work they were to do."

In regard to the technological developments of the war period, no one denies that they were many and important. But industrialists point out that these advances will not be fully utilized by manufacturers for many years; and that, in any case, they will require extensive new investments in plant, machinery, and equipment which must, to some degree, be paid for out of the gains in productivity that will ensue.

Considering all the conflicting testimony concerning productivity during the war, some students of the subject believe that the gains and losses have largely canceled out, and that the overall level of man-hour output today is

approximately where it was at the outbreak of the war. This would follow the experience in World War I, when productivity stood still from 1914 to 1919.

Every indication points to increased use by American industry of labor-saving devices and processes to increase productivity. Machine tool makers are pleasantly surprised by the volume of orders that flooded in after the war ended—a sign that manufacturers are out to push up man-hour output by greater use of special-purpose tools and modern equipment. Industrial uses of power are multiplying, and no one

knows what the eventual use of atomic energy will do to productivity. New chemical and physical processes are pushing old methods aside and increasing output. In the years after World War I, increases in productivity in manufacturing went as high as 10 per cent a year on the average. With the far wider technological development of the war just ended, it is not too optimistic to expect an even faster upward movement when the wartime technical gains are consolidated.

By HERBERT FREDMAN. *Commerce*, April, 1946, p. 15:3.

Library of Tools

THE Chrysler Junior Craftsmen's Club is an integral part of the recreation program of Chrysler Corporation, Detroit. Club membership is open to any boy 10 to 15 years of age who is a son of a Chrysler employee. Before the war, club membership was 872; during wartime it climbed to 1,400.

Space in one of the plants, well away from the manufacturing section, is allotted to the school. Complete woodcarving, leatherwork, and metalcraft tool kits have been supplied by the company. Craftsmen from the plant donate their services as instructors and have built small cribs to house the tools. All tool kits are checked out from the cribs in the same manner books are borrowed from a library—hence the name "Library of Tools."

The school is open five evenings a week from 7:30 to 10:00 p.m. The boys are free to choose their own projects in leather, metal, or woodcarving. After making his choice, a boy goes to the crib, gets the proper tools, and signs a library card bearing the name and number of the tool kit. After the card is signed, he is free to take the tool kit home and keep it until his project is completed. The instructor helps him get started on the project, but no projects are completed at the school.

—*Idea Clinic* (Industrial Recreation Association)

Time Off as Production Spur

FROM England, belatedly, comes this report of wartime experience with incentives:

A small plant was assigned a quota of 500 aircraft instruments a week. The workforce was adequate. Machines were up to date, and operations were simple. Working conditions were good. But the quota was never met, despite overtime.

Bonuses, incentives, pep talks, pleadings, threats—none worked.

Finally, management announced that all workers would be paid for a full 54-hour week (the then British standard workweek), but that they could go home the minute their individual daily stint or the 500 units for the entire plant was completed.

Self-administered by employees, the plan clicked. Many were out of the plant by mid-afternoon; none worked on Saturdays. Leisure time proved a better stimulant than increased wages.

—*Modern Industry* 4/15/46

X-Ray Aids Inspection

THE USE of X-ray in the inspection of various kinds of manufactured goods, from shoe heels to candy bars, has become established as an invaluable method for assuring quality control. More recent is a trend toward the use of X-ray as an aid to packaging, permitting the examination of products and their arrangement in the container after they have been packaged.

In candy manufacture, for example, the arrangement of items in the box is important, and in every field it is necessary to be certain that each package contains its full measure. Most important, many types of processing demand every possible precaution against the inclusion of foreign objects—which, in the case of food products, can be the cause of costly and embarrassing claims.

X-ray does not supersede, but supplements and checks on, all other methods of inspection. At E. J. Brach & Sons, Inc., Chicago candy manufacturers, for example, the X-ray machine is placed at the end of the line, where it is focused on packaged candy just before the cartons are placed into shipping containers. It is interesting to note that Brach, in addition to its X-ray unit, also employs almost every other known method adaptable to the thorough examination of its product.

The type of X-ray that is used for

continuous production-line inspection is known as fluoroscopy. This may be defined as the use of X-ray to excite visible light from a fluorescent screen, thus permitting the examination of objects while in motion. Only the visual ability of the operator limits the speed of the line. Operators should be alternated every hour to avoid fatigue.

Located between the cooling tunnel and the casing stand, the Brach installation consists of a double line passing through the fluoroscope, although only one line is used at present. The second line is provided, however, to meet the requirements of increased volume. The beam spread from one X-ray tube is sufficient to handle both lines. This installation also incorporates an ejector mechanism by which the operator, by hand, can quickly remove a defective box of candy without slowing the line.

The box passes between the X-ray tube and the fluorescent screen, thus casting an X-ray shadow of the candy on the screen, which then produces the image in visible light. The total cost is only a few cents an hour.

Brach has turned its X-ray equipment into a valuable public relations weapon—featuring X-ray in its current advertising.

Modern Packaging, March, 1946, p. 164:2.

Odor Control for Industry

INDUSTRIAL application of chlorophyll air freshener cut absenteeism from 1 per cent to zero and eliminated 15 to 20 minutes daily layoff due to nausea on the part of many women employees in one watch company, states W. H. Wheeler, Inc. Odors had become a grave personnel problem, with Swiss mechanics insisting upon use of high-smelling cutting oils, women employees losing time on piecework, and absenteeism cutting important production. Success of the first odor-control installation led to two others, where odors were of the types more normally met with in industry.

—*Modern Industry* 4/15/46

Engineering Wage Incentives

WAGE incentives have by now been effectively applied to almost all grades and classes of employees—and to almost all kinds of work. However, the surface has barely been scratched in the adaptation of wage incentives to the engineering function, though this is one of the most fertile fields open to the well-proved efficacy of extra-financial incentives.

The following paragraphs describe an engineering wage incentive plan which will illustrate the line of thinking which considerable analysis and study have proved to be best adapted to this field. While it pertains specifically to aeronautical or automotive engineering, its principles are generally applicable. Its direct purpose is to maximize the rate of quality engineering work and to accelerate the development of design within an engineering division.

Because engineering work is of such varied nature—both in kind and quantity—as to make individual measurement impractical, and because efficient engineering of a product can result only from the successful coordination of various closely integrated teams working toward a common purpose, it is recommended that the stimulus be applied on a group basis.

The efforts of all groups—research, drafting, and administrative—are directed toward the final production drawings flowing from the design groups of the various projects. It is recommended, therefore, that only finished work be measured, and on this basis, awards be made to the design groups as well as to the research, service and administrative groups contributing data, advice, service, and personnel. Separate classifications are first made of the project groups, the service groups, and the administrative

groups—based, of course, upon actual function.

To assure that performance will be evaluated on the basis of a just standard of comparison, project groups should be compared to one another rather than to a remote criterion. Rewards should then be made on the basis of relative project showing. In turn, service and administrative groups will be compensated on the basis of their evaluated contributions to the project rating.

An empirical, but practical working system has been developed to be used in establishing quality and quantity standards for engineering drawings.

The standard employed places emphasis on the accuracy of drawings while also taking into account the number of drawings (units of work) completed in the stipulated period. Quantity and quality factors are separately determined and combined into a single quantity-quality rating. The uniform employment of a reliable gauge of drafting output, applied consistently in the case of all individuals and groups, insures an equal and just measure of performance.

A study of representative samples of past drawings, perhaps those dating two years back, must first be made to determine what the mean rating for individuals and groups has been in the past. This average represents the standard and should always be kept up to date, generally by yearly revisions.

For example, assume a level of drafting quantity-quality which merits an attainment rating of, say, 78, at which point improvement has leveled off. It would be the purpose of the incentive to direct this efficiency curve upward once more. Therefore, the incentive bonus would be paid for im-

provements in efficiency—which, in this case, will be represented by increases above the 78 level. Separate schedules of bonus payment are established for each project, based equitably on percentages of the project's yearly payroll total.

If the yearly payroll for project XYZ is \$280,000 and 10 per cent is established as a desirable increment for peak efficiency, the top level of payment is \$28,000 per group per period. Since 78 is the past average group rating, and a bonus is to be paid for all improvement above 78, 79 will be the bottom level of performance meriting an increment payment. Increases above 79 will be rewarded by proportionate increases in bonus. Thus an increase to 80 would pay \$14,000 to each group—project, service, and administrative. An increase to 81 would pay \$16,000; to 82, \$18,000; to 83, \$20,000; to 84, \$22,000, and so forth.

Schedules for each project are prepared along similar lines. Equal sums are set up for distribution to project, service, and administrative groups. Relatively larger rewards will be available for distribution to the comparatively small project design groups. However, shares will tend to be equalized by virtue of the fact that service and administrative groups will be participating in the rewards of a larger number of projects.

Monthly figures are released, giving the average standing to date of each design group in the project and of the project as a whole, as an impetus to each to improve its rating and thereby increase its bonus. The final cumulative figure arrived at, after a three-month audit, will serve as the basis of a reward payment to the project—and thereby as the basis for the service and administrative rewards.

For example, XYZ ratings might be

as follows: January 15 project average rating, 78; February 15 project average rating, 79; March 15 project average rating, 81. Therefore, on March 15 the XYZ project would be rewarded on the basis of 81, making its reward \$16,000 and the rewards of coordinating service and administrative groups \$16,000 respectively.

The breakdown of the bonus awarded to the six design groups of XYZ project, whose cumulative rating was 81, would depend upon the individual performance rating of each group. The varying size and talent of the different groups is taken into account as a weighing factor.

The next step is to apportion the reward of each group among the individuals who comprise the group. For this purpose, it is reasoned that the wage or salary of each individual accurately measures his value to the group. Therefore each individual receives as his share of the group reward a sum which bears the same proportion to the wage total group reward as does his salary to the total monthly group payroll.

Since the final result of the efforts of the project design or drafting groups is a direct product of the time and energies contributed to them by various research and service groups, it is fitting that the latter be rewarded in the same degree as the project groups. Their total reward will depend on the project rating (or projects, if they contribute to more than one) and its sum will be equal to that earned by the project. Service groups will participate in the rewards of each of the projects in this fashion.

The number of hours charged by each service group to a given project will be taken as the measure of that group's contribution to the project. The time contributions of all service

groups corrected to 100 per cent will serve to indicate the extent of each service group's participation. This information can easily be developed from data collected by efficiently operated engineering divisions.

However, to pursue further the example set up above, \$16,000 would also be available to the service groups who have contributed to the rating of 81 made by the XYZ project during the stimulated period.

The allocation of a particular service group's reward, among its members, will be made along the same lines as in the case of the project groups. Each individual receives as his share of the group reward a sum which bears the same proportion to the total reward as does his salary to the total monthly group payroll.

The administrative units will participate in much the same measured fashion as the service groups.

In order to install this type of incentive system, preliminary studies would first have to be made to establish an initial standard drawing rating. Reward schedules would also have to be set up for each project based, of course, on an equitable evaluation and careful study of each project's individual problems. An educational program to both explain and "sell" the incentive idea to the engineering staff would have to be undertaken. Experience attests the welcome reception and cooperation which such plans evoke from professional personnel.

BY WALTER M. MIRISCH. *Mill & Factory*, February, 1946, p. 112:5.

Buying Pointers for Purchasing Agents

WHAT can purchasing agents do to improve their relations with suppliers and salesmen? The following suggestions were offered by a group of sales managers in a recent issue of *Modern Industry*:

1. Check all purchase orders; see that they contain complete specifications to avoid return of incomplete orders.
2. Find out—and tell the supplier—how the material is to be used. He knows his material and may be able to save you endless production troubles, improve quality, and reduce costs.
3. Don't try to force suppliers to sell at a loss. They have to stay in business, too; and "bargains" are rarely up to par.
4. Remember that courtesy pays off.
5. Keep complaints down to a minimum. Investigate troubles thoroughly before referring them to the supplier.
6. Listen to all salesmen who call, keep a record of their names, the companies they represent, the products they sell, even if you may not need the information now. Someday it may be the answer to your prayers.
7. Don't automatically bar salesmen from going out into the plant. Help them to see the men who will be interested in their products, and give them a chance to help you.

—The Advertiser's Digest 12/45

Industrial Injuries in 1945

ABOUT two million workers were injured at work during 1945, according to preliminary estimates of the Bureau of Labor Statistics. Of these, 16,000 were killed and over 84,000 had permanent impairments. Time loss was 218 million employee-days, the equivalent of full-time annual employment of 725,000 workers. Total injuries were, however, 10 per cent below the 1944 wartime level.

—Monthly Labor Review 3/46

Streamlining the Purchasing Function

THE purchasing department can make a tangible contribution to the company's over-all operating effectiveness and to its outside relations with suppliers only if its functions are properly coordinated with those of the departments it serves and if its procedures are adequately systematized.

In many organizations there is a conflict between the purchasing department and many other departments of the business. While purchasing is unquestionably the only division qualified to handle the over-all procurement activities, individual departments, nevertheless, are usually best qualified to specify what items are to be purchased in certain categories.

For example, the manufacturing department is usually better qualified to decide which make of machine tool should be installed, and in order to arrive at a decision, the comparative prices should be obtained. The plant engineering department is frequently better qualified to place contracts for new buildings, construction projects, new roofs, and the like. The advertising department knows more about the media in which the company's advertising message should be carried.

It is often possible and advisable to execute contracts for supplies regularly purchased, such as office supplies, factory supplies, etc. Fuel oil, coal, and similar commodities can frequently be purchased at a considerable price advantage when requirements for a year or some such period are contracted for all at the same time.

Needless to say, the major effort of any purchasing department should be devoted to obtaining the best sources of supply at the lowest possible prices. A saving of a few cents per pound on a given commodity is important when

many thousands of pounds are purchased each year. To this end, adequate records should be maintained by the purchasing department. Statistical data on price trends of basic commodities are generally very valuable.

Further, a card file of vendors should show volumes purchased yearly, maximum capacity of the vendor's plant, quality of merchandise furnished, dependability of shipping promises, and other data regarding the vendor's service. Your own sales department, incidentally, can make valuable use of the file of vendors showing the annual volume of purchases for, if you are a substantial purchaser, and a vendor can, in turn, use *your* product, he should be urged to do so.

Another valuable card record is a file of commodities, indicating where each can be purchased, the total quantity bought annually, all price fluctuations, and any other information of significance to the buyer.

Catalog files—another important source of purchasing data—usually must be kept in folders because their sizes vary. They should be filed alphabetically according to vendor's name, since most catalogs cover a multitude of items. The commodity card file mentioned above should serve as a cross-reference to the catalog file.

Copies of the purchase orders themselves should be filed alphabetically by vendor's names. However, if cross-references by commodities or requisition numbers are needed, extra copies of the purchase order can be made and filed in the desired order.

Unfortunately, most companies neglect to establish standard specifications for the various commodities they buy. Some commodities have standards established for them by the industry in-

volved. The National Association of Purchasing Agents has developed many standards. Other sources are the American Standards Association, Bureau of Standards, American Society of Mechanical Engineers, American Society of Automotive Engineers, Navy, Army, etc. Where a commodity is made to order for a particular company, however, standard purchasing specifications should be drawn up to indicate in detail all requirements.

When goods are purchased under specifications, an inspection routine should be established for determining whether the delivered goods comply with the specifications. When commodities are purchased in appreciable quantities it might pay to take samples of each lot received and send them to a testing laboratory for examination. For example, fuel oil purchased on a B.t.u. basis should be subject to laboratory analysis.

Where laboratory tests are not indicated, commodities should be inspected upon receipt to check the quality and quantity of goods and to note any damage or shortage. Standard procedures for receiving should be set up, designating which incoming items are to be counted. Where counting is impractical, because the items are small or have been shipped in great bulk, counting scales are used. These indicate, within a high degree of accuracy, the count of any given quantity of goods.

As a rule, nothing should be purchased before a quotation has been secured. Some companies require quotations from three different vendors before making a purchase. Complete specifications should be available for each commodity for, obviously, competitive quotations on different items are of no value.

For this purpose, forms requesting

quotations should be available. These forms should specify the same terms as appear on the purchase order form and should be introduced by some such statement as: "Except as stated otherwise in your quotation, your offer will be considered to be subject to the following conditions."

It is well to determine, before the order is written up, just where the item is to be delivered. This information should be entered on the purchase order. If the item is to go in stock, the bin location should be shown. In this way the receiving clerk knows just where to put the incoming order and whom to notify of its arrival.

After the order is actually placed, it should be followed up, say, in 10 days, to see that promises have been kept. Where no acknowledgment or delivery promise has been received, a postcard follow-up should be mailed, asking when the order will be shipped.

If the number of purchase orders issued can be cut and the value per order increased, the costs of operating the purchasing department will be lowered considerably. A means of economy that is overlooked by many companies is the co-ordination of purchasing between various plants of the same company. Parts, raw materials, and supplies purchased at each plant should be analyzed to determine which items are bought for more than one plant. These could then be bought in larger quantities, with resulting price economies. Such a procedure might mean the difference between buying direct from the supplier's mill rather than from a branch warehouse. Or it might mean the difference between carload or less than carload, or a standard package as against a broken package.

Many of the large chain stores have built up big businesses by this one

method alone, thus enjoying the economies of purchasing in large quantities for delivery to many stores. A progressive manufacturer with more than

one plant cannot afford to overlook this cost-cutting opportunity.

By EUGENE CALDWELL. *American Business*, November, 1945, p. 12:7.

Marketing Management

How to Audit a Mailing List

A NEW specialist called a "mailing list auditor" has arisen in the advertising field. His emergence is entirely natural, since the mailing list has long been one of the weakest links in the marketing programs of our large and otherwise efficient business concerns.

While the quality of direct mail advertising has shown gradual improvement over the years, as have other forms of advertising, the efficiency of the average mailing list has remained at a standstill. The waste from duplications, and mailings to dead names and non-prospects is startling. The average user of the mailing list has imposed a heavy tax on himself, part of which he pays to the government in the form of excess postage, and part to printers and paper companies for quantities of non-deliverable printed matter.

The cause of this inefficiency can often be laid right on the doorstep of the advertising manager. He is so busy that he often delegates the selection of names to be added or removed from the list to an assistant who may not always have a clear picture of his company's products, marketing problems or real prospects. The efficient maintenance of a mailing list requires the application of common sense, and a

thorough knowledge of the company's product and its market. It is a job that demands eternal vigilance. The person chosen for the task should be a shark for details and possess better-than-average judgment.

There are many concerns which operate under two or three names. It is quite common for an advertiser to send mail to each and for the same man to receive it all. The sharp-eyed mailing list auditor is always suspicious if two or three names have the same street address.

Those advertisers who mark their third-class mail for the attention of an individual should investigate whether that individual is still with the company. Unless the mailing list department is really keyed to do a top-notch job, the department name should be entered in preference to the name of the individual. In many cases it is sufficient to address it to the firm, for the mail clerks in most companies are adept at properly routing the incoming mail.

In order to revise lists, the advertiser should:

1. Send out an inquiry every year, under first-class cover, asking the recipient to help correct the list by returning the card and supplying the correct address. The outside of the envelope should have a notice to the postmaster,

similar to the following: "Postmaster: If mail is not deliverable to address shown, please return to writer." The notice will usually prevent the postmaster from forwarding the mail in case the addressee has moved, and enables the sender to run down the correct address.

2. Watch the trade papers for notices of changes of address or name, new concerns, combinations, deaths, etc.

3. Ask your salesman (company salesmen, distributors' or dealers' salesmen) to advise you of all changes. Some concerns supply salesmen with "change of address" blanks.

4. If lists of names in cities are of worth-while size, send them to the postmasters in those cities for checking the names and addresses. They will eliminate dead names, show changes of address, etc., for a nominal fee.

5. All third-class mail should carry the legend, "Return postage guaranteed" and also the clause: "Postmaster: If addressee has moved, notify sender on Form 3547, postage for which is guaranteed." These legends will help weed out the dead names but they won't do the entire job.

6. All mail should be zoned, if possible, to speed delivery and to effect delivery which might not otherwise be made. The Post Office Department is glad to assist in zoning lists. If the lists are separated into cities, the postmaster will mail them to postmasters in the various cities under his franking privilege, without cost to the advertiser. Each individual post office will zone the list

and return it in from three days to two weeks, depending on how busy the post office is.

Many concerns have definite regulations for weeding out unproductive names. Sears, Roebuck and Co., for example, is able to grade its customers—as a result of its long experience—into groups, based principally on the customer's past business record. Groups with low potential business value are removed from the files periodically.

The advertising budget can often be relieved considerably when the list has been brought up to top efficiency. Every dead name removed means a substantial saving in postage, cost of printed matter, addressing, stuffing, etc. The investment in direct mail advertising is about \$300 million annually. If we can save 10 per cent of this by having efficient mailing lists, \$30 million will be released for additional advertising, expansion or dividends.

BY CLYDE TOMPKINS. *Advertising & Selling*, March, 1946, p. 58:2.

101 Companies Report on Sales Costs

GENERAL anticipation of a considerable rise in sales costs, and increased emphasis on territorial alignment and sales training were reported by a majority of 101 companies covered in a recent Dartnell study on control of sales costs.

Tremendous variation was shown, however, in the percentage of total expenses chargeable to sales; while this is probably due, in part, to practices differing from industry to industry, a more important factor undoubtedly continues to be the lack of standardiza-

tion on the types of expenditures considered chargeable to the sales department. The range in reported percentages of total costs was from 52 to ½ per cent, with an average for the entire group of 15 per cent. However, the prevailing disagreement about accounting procedures is plainly shown by the answers to the question, "Is advertising charged to sales?" Of the companies reporting, 58 said it was, 22 said it was not, and three reported charging it in part. It is apparent that all the respondents were not consid-

ering the same factors in their analyses.

Despite these differences in methods of budgeting, certain trends and expectations were clear. For instance, the sales manager of an Atlanta manufacturer voiced a general feeling when he said:

We think our sales cost is down to the bone at present. The pressure for reducing mileage during the war forced us to cut out all unnecessary effort. If we could hold to our present plan, we would be very well pleased.

From the West Coast, an executive in an auto supply company writes:

We are not, at this time, planning to reduce our sales costs. With heavy competitive selling already existent in the field we serve, we anticipated that our sales costs will rise substantially if we are to hold a sizable portion of our volume. In addition, expansion to new lines will increase costs abnormally during the early stages.

A manager in the automotive parts field had this suggestion:

Fixed expenses cannot be reduced appreciably if good management is already in force. Fixed expenses go down percentage-wise when volume goes up. What we need is fewer wholesale and retail outlets in order to get larger volume of sales. This will automatically reduce all costs.

A device commonly under consideration to avoid an excessive rise in sales cost is that of redistricting salesmen by territories or quotas. Seventy per cent of the responding companies said they were planning to concentrate more of their sales efforts in the future on more profitable areas and customers buying in greatest volume. Representing this majority opinion is the following comment from an eastern milk distributor:

Our plan is to assign enough salesmen to each area so that every man can do a satisfactory job. We will try not to load our salesmen down with too many customers or too many duties—that would prevent the job from being done in a reasonably short period of time. In each

of our territories we have made a pretty thorough market analysis and will be able to direct our sales effort on increased numbers of customers and increased sales to our present customers.

Although this trend is general, it is far from unanimous. One manager, for example, takes the opposite view:

We are not realigning any territory, but are operating in the same area as we did before the war and expect to continue on that plan. We are aware that there is a movement to curtail selling territory under the mistaken idea that manufacturers will be able to move more goods into the territory if there are three men working in a small area instead of one man. This is a fallacy. One man will work, and work hard; three men will become disgusted with their small incomes and retire into other fields of activity. The pasture must look just as inviting to the salesman as the increased profits do to the manufacturer.

Although 56 per cent of reporting subscribers said that turnover in the sales force was not a serious part of sales cost, a majority is planning to improve the training programs offered to new salesmen. Typical of the 81 per cent reporting such programs either under way or being established is the comment of a candy manufacturer who writes:

There is a definite need in all types of business and industry for men who have had the psychology of salesmanship taught them. So many men that apply to us for jobs as salesmen have had no training or come from firms which do not have training programs—they call their staffs salesmen just because they have called on customers to take orders for a commodity. We find that men who have had a college education or men who have had years of experience grasp the idea of selling psychology much better than men without college training or men who have been in the selling field just a short time.

Among the firms which reported no contemplated change in compensation systems, a majority indicated that they have operated all through the war with some sort of incentive plan. Consid-

ering these subscribers with the 41 per cent who are now contemplating a change to such a system, it will be seen that a large majority intends to use a bonus arrangement in the future.

Existing systems of expense analysis were considered satisfactory by 82 per cent of the contributors, and only one quarter of the group has recently started using any new sales control forms.

The general feeling that a rise rather

than a reduction in sales costs is to be expected was shown particularly in replies to two other questions about expenses: Sixty per cent of the reporting companies do not intend to make any attempt to readjust operating expenses; and opinion was almost unanimous that it will be impossible to reduce automobile allowances in the near future.

The Experience Sheet (Dartnell Corporation, Chicago).

There May Be Trouble in Ideas!

A CONTRACT with provisions clearly expressed and a sturdy, comprehensive release against subsequent claims by the proponent of an idea are as essential for trafficking in advertising or promotional schemes as are buckskin gloves in handling a porcupine. Contract lacking, the idea escapes and is the property of any who may wish to claim it, and the striking power of an unscrupulous author in his subsequent claims can cause endless trouble.

Unfortunately this defensive attitude is a common characteristic of those to whom offers of advertising and promotional ideas are suggested. In many instances, on the other hand, such schemes have real value to advertisers. Suspicions of this sort, however, are the natural consequences of experiences such as those highlighted in a case some years ago, brought against the manufacturer of a popular cleanser. The idea promoter there proposed he be paid one-half the profits from his plan for the distribution of that company's soap product. The offer was accepted. The profit increase was \$131,364 and a verdict was directed at

the trial in favor of the idea promoter for one-half of this amount.

The cleansing preparation of the company at that time was sold to the general store trade at \$10 a gross to be retailed at 10 cents a package, thus netting the retail grocer 40 per cent. The idea the company bought, and for which a judgment of over \$65,000 was directed, was that the price to the retail grocery trade be raised from \$10 to \$10.50 or \$10.80, thus reducing the retailer's profit with a corresponding increase to the manufacturer.

The trial court concluded that any price increase, subsequent to this agreement with the idea proponent, was an adoption of his plan, hence the proponent was entitled to the half specified by his contract. The appellate court said, reversing this judgment: "The plaintiff did tell the defendant a method by which its profits could be increased, but it was not valuable information in the respect that it was new or novel. It merely informed the defendant that by the adoption of the idea known to every person—increasing the price—increased profits would result." The proposed plan was familiar to every-

one; it was neither new or novel, hence, no consideration, no contract, and no recovery.

In St. Louis, some years ago, a meritorious plan for increasing sales in a department store was submitted with the understanding that the author of the plan receive "whatever amount should be found to be the reasonable value after said plan had been tested and tried." The program called for an organization of the employees of the store into teams for securing new customers, with prizes to the most successful. While the compensation to the author of the plan was left indefinite in the agreement, the scheme itself was concrete, clearly defined, and its adoption enabled the store to gain approximately 2,600 new accounts. Last year, in determining the lawsuit arising from this transaction, and awarding the author of the scheme \$10,000, the court said, in reference to the indefiniteness that characterizes so many of these contracts: "Generally a definite price or compensation is an essential element of a binding contract. But the rule with respect to contracts executed except for payment is that there arises an implied promise to make reasonable payment."

The rule asserted in this Missouri decision is undisputed: a promise to pay for benefits or goods received or the acceptance of goods offered for sale implies an obligation to pay the price. Not so, however, when neither the subject of the sale nor the price to be paid has emerged in concrete form from the negotiations between the parties.

The decision, however, that is a cornerstone in the law relating to this traffic in ideas, and that emphasizes the execution of a contract as a paramount factor in these transactions, is a famous New York decision handed down over

half a century ago and still an authority in this branch of the law.

The originator of a plan for soliciting life insurance wrote a large life underwriter asking for employment and in the letter outlined his program. He failed to secure employment, but the plan, according to the author, was later adopted and used by the company. Thereupon suit was brought for the compensation claimed as due.

The law set forth in the determination of this case has become a classic: "Without denying that there may be property in an idea or trade secret or system, it is obvious that its originator or proprietor must himself protect it from escape or disclosure. If it cannot be sold or negotiated or used without disclosure, it would seem proper that some contract should guard or regulate the disclosure, otherwise it must follow the law of ideas and become the acquisition of whoever receives it."

The casualty list is long of those who have listened to the proposers of these promotional ideas and trusted. Few things, irrespective of results, are less remunerative and more expensive than lawsuits. The law reports are filled with the records of promotional schemes that have failed. Human nature may be evangelized by success but never by failure.

Before any discussion or correspondence of any sort, insist without qualification on an agreement and a release, validated by some consideration—either payment to the proposer of the idea or agreement by the suggested buyer. Do so and when, after disappointment, the storm breaks, your protection is assured.

BY ALBERT WOODRUFF GRAY. *Advertising & Selling*, January, 1946, p. 77:3.

Financial Management

What Outlook for a Balanced Budget?

NOT since the fiscal year which ended June 30, 1930, has the Federal Government confined its expenditures within the bounds of its revenues. The depression and, later, the war kept the government from living within its income. From the middle of 1930 through the end of last year, the total deficit amounted to \$230 billion.

If we are to avoid national bankruptcy, it is obvious that the budget must be balanced some time. The next few years, when the economy will be sustained by the desire of consumers to fill their long-deferred demands and their ability to do so by use of their tremendous wartime savings and (peacetime) record current income, would appear to be the time to put a stop to deficit spending.

The President's budget message, delivered late in January, indicated that this goal would be approached during the next fiscal year, but that it would not be attained. Budgeted expenses will be \$4,347 million in excess of estimated receipts. Excluding government corporations and credit agencies, the deficit will be \$3,612 million, almost exactly equal to that for the 1939-40 fiscal year, and obviously far below the deficits incurred during our participation in the war.

This constitutes at least a gesture in the direction of balancing the budget. Another change in attitude is represented by the plan, already started, to retire part of the debt by use of the Treasury's general fund balance. It is anticipated that a deficit of \$10.5 billion will be shown for the six months to end next June; this sum plus \$3.1 billion

of debt retirement during the period will be financed by reducing the Treasury balance, which stood at \$26 billion at the end of last year. Next year's anticipated deficit, plus \$4 billion more of debt retirement, will also come out of the Treasury fund, reducing it to \$3.2 billion as of June 30, 1947. Thus the debt, which totaled \$278.1 billion at the end of 1945, will come down to \$275 billion this June and \$271 billion by mid-1947.

This debt-reduction program and the smaller-than-usual deficit for the forthcoming fiscal year may be regarded as constructive moves despite criticisms of the former by Federal Reserve authorities. But even a small budgetary deficit is undesirable, not only from the standpoint of sound fiscal policy but also because it exercises an inflationary effect by increasing cash and bank deposits.

Next year's budget calls for expenditures of \$35,860 million, a sum only about one-third the amount spent during the 1944-45 fiscal year, but almost four times that of the previous record peacetime year 1939-40, and about double the outlays for the most expensive year of World War I. Thus government expenses would consume some 25 per cent of an assumed national income of \$140 billion, against approximately half that proportion in 1938-39-40 and less than 11 per cent in 1937.

This is a gloomy prospect. The Administration, on the basis of the budget message, stands committed to a level of expenditures that even a healthy economy can barely support, with a rever-

sion to deficit financing indicated for the inevitable subnormal years. We will never get the debt paid off that way. Aside from the threat to the nation's credit standing, this means indefinite continuation of a back-breaking burden of interest charges.

Naturally, government expenses in the years immediately following a war as costly as the recent conflict cannot be anything but high. The 1946-47 budget calls for an outlay of \$15 billion for national defense, \$4.2 billion for veterans' pensions and benefits, \$1.6 billion for tax refunds, and \$5 billion for interest on the public debt. All these charges are the inevitable aftermath of the war. In addition, there is an item amounting to \$1.8 billion for international finance which might be included in the same category. But there is also a sum of \$1.5 billion for expenditures based on proposed legislation, and the budget for other outlays representing, largely, the normal activities of the government amounts to \$5.8 billion. This is an increase of \$1.3 billion over the cost of normal functions for 1940-41.

There is considerable doubt whether sums so huge as these are necessary, or likely to be allowed by Congress. Obviously, nothing can be done about tax refunds or interest charges, and aid to veterans is not a likely spot for economy. But the legislature has grown increasingly independent in recent months, and will undoubtedly scan the other items closely before approving them in full. Even the national defense appropriation (which is about two and a half times as large as that for 1940-41) will undergo careful scrutiny. Its title is somewhat misleading, since it includes some funds for the Treasury and Agriculture Departments, UNRRA, and other non-war government agencies.

The appropriation for public works (more than double the amount for the 1939 fiscal year, when there was considerable unemployment) is especially susceptible to cuts. Outlays for international finance may be pared. And the sum of \$1.5 billion, based on proposed legislation, provides wide scope for reduction; it covers agricultural subsidies, rural electrification, unemployment relief, the St. Lawrence Seaway, and the federal health insurance program.

Thus expenditures may not be so high as the budget figures indicate. The outcome for revenues is less clear. On the one hand, there have been several bills introduced in Congress calling for tax cuts. One would return excise taxes to prewar levels; the latest one proposes a 10 per cent reduction in individual income taxes. The latter, however, is contingent on a \$5 billion reduction in expenditures for the forthcoming fiscal year.

It is not at all unlikely that estimates of revenues will prove to be too low. Thus far in 1946, revenues have been higher than expected and expenses lower. Expenditures from January through June were expected to average \$4.9 billion monthly, while receipts were estimated at \$3.1 billion a month. For January and February, expenses were, respectively, \$4.9 billion and \$3.5 billion, while receipts were \$3.8 billion, and \$3.7 billion.

In the first three weeks of March, tax collections were well behind those for the same period of 1945 as a result of strikes and lower employment, but revenues were \$370 million ahead of expenditures. This is not surprising, since tax revenues are always heavy in March, and a deficit is not unlikely for April and May, but there is little prospect that the estimated deficit of \$10.5 billion for the current six months will actually be witnessed.

Thus there appear to be well-defined grounds for hoping that the Federal Government will be able to live within its income in the 1946-47 fiscal year. Such an achievement would be particularly gratifying in view of the inflationary pressures which will still be present during at least the first part of

that period. But the nation must apparently resign itself to a much higher burden of government costs than would ever have been thought possible before the war.

BY ALLAN F. HUSSEY. *Financial World*, April 3, 1946, p. 3:3.

Who Should Pay for the Pension Plan?

THE widespread interest in pension plans had its inception after the passage of the Social Security Act in 1935. From then until World War II, the majority of pension plans (85 per cent through 1943) were contributory, requiring a fair contribution from the employees, with the balance of cost being borne by the employer. Undoubtedly this contributory feature was encouraged as much by the Social Security Act, which likewise required employee contributions, as by the fact that employee contributions made adequate plans possible at a reasonable cost to the company.

For several reasons given below, all equally applicable today, contributory plans were well received in the past by employee and employer alike—despite the fact that employees were already contributing for various insurance coverages, for old-age Social Security benefits and, in some states, for unemployment benefits.

Contributory plans do not have the paternalistic flavor of non-contributory plans. They are regarded by the workers as less likely to be discontinued by the employer.

Contributory plans make their presence known to employees by the contributions which they themselves make. Too often under non-contributory plans the employees forget, or fail to appreciate, the dollars being contributed annually by the company.

Under a contributory plan an employee accumulates a savings fund which becomes available to him if he leaves his job. The contributing employee is continually conscious of these savings, which frequently relieve the employer of embarrassment when employment is terminated.

Despite these sound reasons for the adoption of contributory plans and despite the unprecedented high earnings of employees, there was a definite trend toward non-contributory plans in the later war years (55 per cent non-contributory in the 16 months after January 1, 1944) for the following reasons:

1. Heavy deductions from employees' pay as a result of income taxes and government bond subscriptions, in addition to other deductions.
2. High earnings of companies.
3. Reduction of cost to employers by savings in excess profits taxes.
4. Salary Stabilization Unit and War Labor Board rulings restricting salary increases but approving retirement plans.
5. Greater freedom to change plan if post-war earnings are unfavorable.

Experience has shown that contributory plans adopted before the war have been continued without difficulty. Contributory plans adopted during the war—even those including wage-earners as well as salaried workers—have had remarkable participation records when thoroughly explained to the employees.

If a plan is abandoned, the company must prove to the Commissioner of Internal Revenue that it was originally

intended to be a permanent program, in order to avoid the disallowance of tax deductions claimed in previous years. The difficulty of establishing such proof, as well as the effect of discontinuance upon employee morale, makes it advisable to keep the cost of the plan within reasonable limits so that it may be maintained even under unfavorable earnings conditions. Em-

ployee contributions are one means of attaining this objective.

Since many of the reasons for adopting non-contributory plans during the war are no longer cogent, we can probably expect a trend back to contributory plans.

By H. CHARLES KWASHA. *Central Hanover Pension Bulletin*, April, 1946, p. 4:1.

Pensions Are Taxable

NOW that the war has ended, large numbers of employees kept beyond normal retirement age soon will be retired. An employer who has installed a modern "qualified" retirement system can help these departing workers by informing them briefly regarding taxation of their pensions. Here is the information they will need:

(1) The employee's Social Security pension, including the portion his wife may receive, is not subject to federal income tax.

(2) If the employee has *not* contributed toward the cost of the employer's pension plan, the pension he receives is added to whatever other taxable income he may have, and his income tax, if any, is based on the total.

(3) If the employee *has* contributed toward the cost of his pension, he reports as income 3 per cent of his total contributions (exclusive of any part used to pay for life insurance benefits) until the non-reported income equals his total contributions; thereafter, all the pension is reportable. To illustrate: (a) An employee retires January 1st with annual retirement income of \$1,000; (b) his total contributions equal \$2,000 (interest is not added for tax purposes even if credited); (c) the first year, the employee reports \$60 as income (3 per cent of \$2,000), and \$940 is not reported, since it represents refunded contributions; (d) the second year, the same conditions exist; (e) in the third year, the remaining tax-free income (\$2,000 less \$940 x 2) is \$120, and the employee reports as income for the year \$880 (\$1,000 — \$120); (f) thereafter the \$1,000 is reported as income in each year.

(4) If an employee who has elected the joint and survivorship option dies after retirement, pension payments are continued to the joint annuitant, and payments to her have the same income tax status as to him.

(5) In addition to the federal income tax outlined above, pension payments are subject to state income taxes in roughly one-half the states after the sums received by the employee exceed his total contributions to the plan. Most of the states, however, do not follow the federal procedure (No. 3, above) for determining the amount of such tax.

—Central Hanover Pension Bulletin 2/46

Interest on Overdue Accounts

IN some industries, where substantial amounts are involved, interest is charged on overdue accounts as a standard practice. For example, in certain branches of the wool industry, the terms printed on invoices read: "2% 10 days, net 60 days. Anticipation at 6% per annum and interest at 6% per annum on past-due invoices."

While credit managers have not as yet adopted a uniform policy in regard to the charging of interest on overdue accounts, it is argued that there is no reason, legally speaking, why a broad adoption of this practice would not be feasible. However, where interest is to be charged, the courts have intimated that it must be a general custom of the particular business, known to those engaged in that business, and, particularly, that the interest provision must have come to the attention of the debtor. Thus it would be most desirable to include the information regarding interest in the terms of the invoice.

—CHARLES A. COLTON in *Credit and Financial Management* 2/46

Insurance

What Insurance Buyers Expect from Their Brokers

IN all probability, most brokers earnestly strive to do their best to render good service and advice to their clients. Speaking for the buyers of insurance, however, I should like to outline a few of the sometimes-neglected functions which we believe the insurance broker should perform.

First, the broker owes it to his clients to sell them the services of quality carriers in order that they may be assured of good adjustments, security in the stability of the carrier, and better service from branch offices or departments.

Speaking of quality carriers, the standard by which we buyers should pass on financial condition and stability of a certain carrier is roughly as follows:

(1) The loss-paying record and character of the management must be rated A-plus or better.

(2) Must be licensed in, and its business must be spread over, at least 10 states.

(3) Must have been in continuous operation for a period of at least 15 years. I do not mean to imply that there are not some very good companies that have operated for a shorter period than this, but generally speaking, a company that has operated continuously for a 10- to 15-year period with a good record would be more favorably considered.

(4) Its ratio of losses paid to premiums received during a preceding five-year period should not have exceeded 50 per cent. Some are considerably in excess of this.

(5) Likewise, its ratio of expenses paid to premiums received during a preceding five-year period should not have exceeded 45 per cent. Some are almost double this figure. Combined loss and expense ratios at this level are obviously undesirable.

In analyzing the statements of insurance companies, we note the percentage of their assets tied up in securities, and in a number of instances, we have found that a high percentage of their assets are represented by stocks. This, in our opinion, is not a healthy condition because, for the most part, stocks are speculative. We would rather see our carriers purchase securities such as government and municipal bonds and other investments of this type.

After selling a policy, the broker should perform the service of checking property values and hazards for the buyer. (Building costs have increased as much as 21 per cent; household furnishings, 60 per cent; furniture and fixtures, 75 per cent. "Insurable value" is, of course, cost of replacement, less depreciation.)

Quite frequently, particularly on fire policies, brokers will mail us the policy, together with the invoice, about two weeks before expiration, making no comment, and, in most instances, not contacting us further about it. Too often they fail to make any effort to determine whether the coverage is adequate or the policyholder is overinsured at the time. Perhaps one of the broker's most important responsibilities to the buyer is to keep con-

stantly in touch with him. His advice to the policyholder is vitally necessary if coverage is to be kept adequate and up-to-date.

The policyholder is definitely penalized by violating policy contracts for failure to notify the broker or company of increased hazards, and suffers in event of a loss. Suppose, for example, that the policyholder had been storing some highly combustible commodities, thus unwittingly increasing his risk. If the broker made regular calls on him, he would probably discover this and see to it that his client received adequate protection.

This illustrates the need for more "give and take." To be quite frank, it appears that some brokers are willing enough to increase the buyer's costs—thus raising their own commissions—but seldom endeavor to get reductions in rates or liability where warranted, and very rarely grant rebates. I believe that those brokers who "give" will, in turn, be compensated in large measure. True, they may take a reduction in commission by effecting a rebate for policyholders, but if they help clients to effect some savings, they will usually be rewarded with increased business.

Brokers generally neglect to boost a policyholder's business, whenever and

wherever an opportunity presents itself. A good word for them on the street, at the club, office or shop, will pay dividends in the form of good will and additional business.

In conclusion, here are a few other tips for rendering better service to the buyer:

Inform him when policies broaden; of combinations of coverages that broaden protection at a lower premium; of newer forms that afford more coverage; of all changes that insurance companies are making on his behalf. The broker should be familiar enough with the various types of policies to be able to tell the buyer exactly where he is, and is not, covered. Further, the broker should take the buyer's point of view when a loss occurs, rather than devote all his energies to helping the insurance company and its adjuster.

A good broker should "go to school," keep well informed on the more complicated lines, such as U. & O., boiler, fluctuating policies, etc., in order to be able to give the buyer all the information he needs—whether or not it results in a sale.

From an address by W. B. McElhinny before the Iowa Association of Insurance Agents. (*The Insurance Broker & Buyer*, January, 1946, p. 8:2.)

Life Insurance Plans Under Wage-Hour Law

IN replying recently to an inquiry whether the life insurance premiums paid by an employer should be regarded under the Fair Labor Standards Act as part of the employee's regular rate of pay for overtime purposes, the Wage and Hour Division reemphasized its ruling that such contributions need not be included if the following two conditions are met:

1. The employee must not have the option to receive, instead of the benefits under the plan, any part of the contribution of the employer.
2. The employee must not have the right to assign the benefits or to receive a cash consideration in lieu of the benefits, either upon termination of the plan or his withdrawal from it voluntarily or through severance of employment with the particular employer.

The Division has ruled that its two conditions are not met where an employee may surrender a death benefit policy and receive the cash surrender value.

—*Wage and Hour Reporter* 2/25/46

How New Tenancy Affects Fire Rates

ALL parties interested, directly or indirectly, in any lease arrangement strongly owe it to themselves to obtain information on the approximate effects on fire rates of a move from one location to another. Many have learned from bitter experience that to move "blindly" may triple insurance costs. In certain cases the other tenants in the building may have *their* rates boosted, and the owner of the building may also have to pay a higher rate as a result of the new tenancy.

For example, a metalworker whose rate is about .95 moves into an unsprinklered brick building which is partly occupied by a large power woodworker. He suddenly finds that the woodworker's rate of approximately 2.65 now applies to him. This metalworker should move to a vacant building and become its sole occupant or select a building with a base rate equal to, or lower than, his own—such as .60 for electroplating, .40 for etching metal, .40 for gold beaters, .50 for ice cream manufacturing, or .60 for meat packing, weaving or soda water bottling. It must also be borne in mind that the metalworker would raise base rates lower than his own up to his rate and also raise the entire building rate somewhat.

Lists of base rates are published by rating associations and should be studied by all buyers of insurance.

In general, assuming the new tenant has a lower base rate than the tenants already in the building, if the new tenant has no faulty conditions (such as untidiness, unsafe stoves, lack of fire pails) and uses no volatiles, it is fair to suppose he will not increase the present rate—except for the usual increase always made for an additional tenant and a possible percentage in-

crease on the final rate due to additional tenancy or number of employees. Here the particular schedule in use for tenant and excess charges should be consulted.

Careful attention should be given the type of schedule on which the risk is at present rated, for this may have a decided effect on "probable rates." The schedule used may change due to the new tenancy. Sometimes the "light" rated mercantile or general schedule will change to the "heavy" manufacturing schedule as a result of new tenancy.

Before the new tenant asks his broker to apply for a rate he should see that his premises are fully settled and in full operation, and that the place is in A-1 condition. This means that all rubbish and sweepings should be removed from the premises, and that faulty staircases, floors, doors, and plaster should be repaired. Receptacles for rubbish and oily waste and bins for packing materials should be provided, etc. If defects are fully corrected, the rate published by the rating organization will be *final* and without the usual charge for "P. O." (probable occupancy or unsettled condition).

A tip to remember—rate cards frequently note "P. O.," meaning one of the following: "probable occupancy" or "unsettled tenant now in the building" or "premises locked when inspector called" or "inspection refused." When the rating organization, on request, again inspects the premises and finds them in good operating shape, they remove the notation "P. O." from the rate card and usually lower the rate.

Nearly all fire insurance companies have an engineer or two who is capable

of approximating the tentative rate (assuming no faulty conditions are introduced and hazards and volatiles are safeguarded). This technical service has been found very valuable to insurance buyers.

Company engineers are occasionally requested to inspect the contemplated premises to see if the building construction (floors, skylights, floor openings or communications) can be made standard or the fire hazards segregated. The result may very well be that the new tenant's rate will be set at the lowest possible figure. Installation of standard "wet pipe" automatic sprinkler equipment, with proper alarms, may reduce the rates in some cases as much as 80 per cent, depending on the grading of the sprinkler equipment, construction of building, and class of occupancy.

Dividing a large open area with parapeted standard brick walls and labeled automatic fire doors on each

side of the wall at openings will lower some rates. Segregating a serious fire hazard—such as dipping, spraying or painting with volatiles—will tend to reduce the rate to its lowest possible figure. Skidding the stock off the floor, maintaining three-foot aisle spaces, and lowering stock two feet from ceiling will also assist in rate reduction.

If an assured contemplates erecting a new building, his broker or agent should immediately have the engineer of an insurance company review the plans after consulting the rating organization. His suggestions may eliminate charges which would have appeared in the rating for skylights, floors, floor openings, cornices, and unprotected brick division walls. Proper segregation of the fire hazard may even lower the base rate on locations which are used principally for storage purposes.

BY CHARLES C. DOMINGE. *The Spectator*, March 28, 1946, p. 10:4.

State Workmen's Compensation Legislation

ACTION in the field of workmen's compensation was taken by 37 of the 44 state legislatures which met in regular session in 1945. Second-injury funds were established in 13 states, 4 states enacted occupational-disease laws, 19 states increased the compensation benefits, and 2 states reorganized the agency administering the workmen's compensation law. Other states amended existing legislation on the above points.

—*Monthly Labor Review* 1/46

Survey of Books for Executives

SUCCESSFUL SALES TRAINING. By Eugene Dynner. Advertising Publications, Inc., Chicago, 1945. 174 pages. \$2.00.

*Reviewed by Saul Poliak**

Sales training has consistently lagged behind the training techniques that have been developed for production workers. For all its merit, Mr. Dynner's book reflects this dis-

parity and at the same time emphasizes that this unequal status in application is paralleled by a similar gap in available literature in the two fields.

Mr. Dynner has made a worthwhile contribution to the admittedly scanty body of sound information available about the training of salesmen. The chief value of his book lies in its presentation of practical methods for enhancing the effectiveness of the sales training program. In his preface, the author

* Clapp & Poliak, Inc., New York.

rightly stresses the need for determining principles of training, rather than dwelling excessively on their specific application, but it is unfortunate that the content of the book departs somewhat from this laudable objective, particularly in its insufficient attention to principles of learning and to fundamentals of imparting information.

One is inclined also to view with some misgiving Mr. Dwyer's formula for selection of salesmen.

INDUSTRIAL RELATIONS AND THE SOCIAL ORDER. By Wilbert E. Moore. The Macmillan Company, New York, 1946. 555 pages. \$4.00.

*Reviewed by R. Carter Nyman**

The literature of industrial relations has long needed a comprehensive and fundamental discussion of the interrelations and interactions of industrial and social development. This book is a painstaking, sincere, and impartial attempt to meet this need. In it the author has assumed the view that modern industry is a "complex social organization and a pattern of relations" and has undertaken to show how industry is "set within the society with which it is in constant interaction."

The economic and social circumstances leading to modern industrial society are traced from pre-feudal times through the industrial revolution to the formation of corporations, "big business" and "big labor unionism." How these developments have led to governmental regulation and toward increasing governmental control of both industry and the social order is described. At the end, the author concludes that some middle course between laissez faire and totalitarianism will probably be found.

The historical chapters tracing the development of the modern corporation and "professional" management are written with insight and clarity. Not so much can be said for the remaining chapters in which the discussion is less well integrated, and the material seems in need of more penetrating analysis.

The chapters concerning industrial organization and managerial functions describe the growth of specialization within management and of more formalized organization—or, in the author's words, "blue print" organization. The author points out that in large industries, organization may lead to something akin to bureaucracy. He touches rather superficially upon the development of "scientific management" and dismisses the development of staff personnel administra-

tion in a paragraph or two. What is not brought out clearly is that organization and formalized procedures are merely tools of management, that the real function of management is that of exercising integrating development, direction, and control, and that management must be judged on how well it performs this function both with respect to industrial administration and industrial relations.

The chapters on labor organization and industrial relations and industrial conflict are comprehensive but suffer because the approach and treatment are from a sociological point of view. This brings out, to some extent, the interactions of economic and social conditions and developments, but it does not explain *why* these have interacted as they have. After all, these surface developments come about because of an underlying interaction of natural conditions and the psychological characteristics and processes of human beings. This aspect of the problem of industrial and social relations is dealt with only sketchily.

For example, the author points out in a chapter on motivation that one of the goals of people in our industrial society is that of "status"—of gaining recognition of skill or position. He does not show *why* the goal of status is sought, or why it is important. He shows that industry and labor have contended for power in their efforts to satisfy their "divergent" ends, but he does not make clear *why* they have engaged in a contest for power instead of developing relations of constructive cooperation. These things probably cannot be explained by a sociological approach but only in terms of the fundamental desires of human beings both for physical self-preservation and for psychological adequacy.

Despite these deficiencies, Mr. Moore is to be congratulated for his careful, objective, and impartial discussion and for his pioneering attempt to bring out the interactions of industrial and social relations.

INDUSTRIAL MANAGEMENT IN TRANSITION. By George Filipetti. Richard D. Irwin, Inc., Chicago, 1946. 311 pages. \$3.75.

*Reviewed by Ordway Tead**

This book essays a task which has never been undertaken, either in aim or in method. The aim is to consider "the approach to industrial efficiency within the framework of democratic institutions." The method is to review carefully selected volumes as reflect-

* Personnel Director, Yale University, New Haven, Conn.

* Editor of Social and Economic Books, Harper & Brothers, New York.

ing over the last 30 years a progressive process of analysis, appraisal, and proposal in the field of industrial operation from the point of view of how efficiency and democracy are to be reconciled.

In historic sequence, the creative thinkers considered are Frederick W. Taylor, Henry L. Gantt, Frank Gilbreth, Morris L. Cooke, Henry Fayol. In less systematic form, the collateral contributions of Tugwell, Follett, Burnham, McCormick, Urwick, and a few others are characterized to show how their ideas have been poured into the main current of developing thought.

At this moment, when collective bargaining is undoubtedly entering an era of new scope, function, and challenge, this synthesis is especially timely and needed. For its central contention is that the place of worker groups in the control of, responsibility for, and participation in the forwarding of low-cost, high-volume productivity is crucial to the integrity of our economic order. We are spared the usual hollow phrases about "free enterprise" and "private initiative," in favor of a humanistic but operational view of how

we do and how we can get out the product, augment the national income, and achieve generally a high material standard of life. And how this is to be done is examined not alone in economic and administrative terms, but in relation to the inner meaning and working of democracy.

This book will not, unfortunately, get as wide a general reading as it deserves, because it makes no concessions to popular taste. But it will affect students at the college level and, it is to be hoped, may prompt some "popularizer" to use the ideas here lucidly expounded in some breezy, anecdotal account of this great trend of our day—a trend which both managements and unions will have to understand and broadly to agree with, if we are to go beyond destructive conflict to a true and feasible basis of collective action in a more cooperative and more democratic operation of our economic system.

Professor Filipetti has performed a definitive service for the managerial world both of industry and of unions in writing this book.

Briefer Book Notes

[Please order books directly from publishers]

TRAINING SUPERVISORS IN HUMAN RELATIONS. Policyholders Service Bureau, Metropolitan Life Insurance Company, New York. 53 pages. Gratis. Designed to assist in developing supervisory skill in human relations, this report is based on the practices of 39 companies which have developed training programs on such problems, and on the viewpoints of specialists in this field. Discusses conditions affecting employee attitudes, organization and development of the training program, training methods, leadership qualifications of the supervisor, effective supervision, employees' problems, and the handicapped worker.

PERSONNEL ADMINISTRATION DURING THE RECONVERSION PERIOD (A Summary of the 26th Annual Conference on Human Relations in Industry held September 13-15, 1945). Promotion Committee, Southern Conference on Human Relations in Industry, 609 Standard Bldg., Atlanta, Georgia, 111 pages. Helpful information and practical suggestions on various phases of personnel administration, labor relations, wage and salary administration, and reemployment of returning veterans.

PROCEEDINGS OF THE 1945 ANNUAL CONFERENCE OF THE LIFE OFFICE MANAGEMENT ASSOCIATION. Life Office Management Association, New York, 1945. 241 pages. \$5.00. Includes papers on employee merit rating, clerical work improvement, personnel management, and maintenance of personnel records.

THE FOREMAN'S STANDING IN INDUSTRY. By F. J. Burns-Morton. Available from the author (Hillsborough, Clarendon Road, Hinckley, Leics., England). 54 pages. 10s. 6d. A report of an investigation carried out under the auspices of the University of Birmingham Faculty of Commerce, and under the direction of Professor P. Sargent Florence.

PERSONNEL REPORTS TO TOP MANAGEMENT. Office of Industrial Relations, Personnel Studies and Statistics Branch, Navy Department, Washington, D. C., 1946. 17 pages. Shows how to prepare graphic and effective reports to top management on the progress of the personnel program.

NEW CAREERS IN INDUSTRY. By John M. Amiss and Esther Sherman. McGraw-Hill Book Company, Inc., New York, 1946. 227 pages. \$2.50. Basic occupational

information for those who desire to make a career for themselves in industry. In an informal, readable style, the authors introduce the reader to each job and career and outline in specific detail the duties, working conditions, wages, and job qualifications. They emphasize the importance of the individual job, its place in the total pattern of industry, and the opportunities it offers for advancement. Finally, they tell how to plan for the educational training that will be most valuable in certain jobs and how to evaluate one's own qualifications.

ORGANIZATION: *A Formulation of Principle.* By Alvin Brown. Hibbert Printing Co., New York, 1945. 302 pages. \$3.00. This book formulates 96 principles of organization, apparently meant to fit together into a logical whole. While it may interest those who are fond of careful, logical distinctions and neatly defined principles of what *should* be, it will not prove of much value to those who are interested in the actual functioning of organizations.

NURSING IN COMMERCE AND INDUSTRY. By Bethel J. McGrath. The Commonwealth Fund, New York, 1946. 356 pages. \$3.00. Mrs. McGrath has produced an authoritative guide to the manifold duties and responsibilities of the industrial nurse. Discussed are the nurse's place in the industrial organization, her relationships with officers and employees, the physical facilities of the nursing service, the health education and hygiene activities of the nurse, her role in occupational and non-occupational illnesses and accidents, records and reports, workmen's compensation, rehabilitation, and many other difficult problems.

EMBEZZLEMENT AND INTERNAL CONTROL. By Albert E. Keller. Warner-Arms Publishing Co., Washington, D. C., 1946. 239 pages. \$3.00. Shows how improved accounting systems and internal control procedures can assist in curtailing losses due to embezzlement.

THE WAGES OF FARM AND FACTORY LABORERS, 1914-1944. By Daniel J. Ahearn, Jr. Columbia University Press, New York, 1945. 245 pages. \$3.00. This monograph is primarily a statistical analysis of the varying course of two important wage rates in the United States. It compares the wages of farm laborers with those of factory workers from 1914 to 1944, a period during which the wage rates of factory labor in this country tripled and farm wage rates barely managed to hold their own.

MANAGEMENT THROUGH LEADERSHIP. Life Insurance Agency Management Association, Hartford 5, Conn., 1945. 50 pages. Though addressed primarily to life insurance agency managers, this inspirational brochure will be of interest and value to managers and supervisors in other fields.

MODERN PLASTICS ENCYCLOPEDIA. Plastics Catalogue Corporation, New York, 1946. 1,389 pages. \$6.00 in U. S. A., \$7.00 in Canada and foreign countries. Containing nearly 1,400 pages, divided into 12 basic sections, this encyclopedia is a comprehensive guide to the manufacture and use of plastics. It is illustrated and supplemented by tables and charts, covering such subjects as Plastics Properties, Raw Materials Manufacture, Solvents, Plasticizers, etc. Recent basic material developments which have already played an important role in plastics production and in the output of many industries are detailed in the new edition. There are 13 complete directories of all branches of the plastics industry.

SELECTION OF SALES PERSONNEL AND APTITUDE TESTING: *Proceedings of a Conference Sponsored by the New York Chapter of The Society for the Advancement of Management.* Available from X. F. Sutton, Sutton-Malkames, Inc., 2 West 46th Street, New York 19, N. Y. 137 pages. \$2.50 to members of SAM and AMA; \$4.00 to non-members. Includes statements by various authorities on methods used successfully to select salesmen in different industries.

YOUR TARGET. Batten, Barton, Durstine & Osborn, Inc., New York. 18 pages. Gratis. Graphic facts on people and markets, of interest to those concerned with marketing, advertising, and public relations.

A BLIND HOG'S ACORNS. By Carey P. McCord, M.D. Cloud, Inc., Chicago, 1945. 311 pages. \$2.75. Adventures in industrial medicine related by a physician who has made a career of the discovery and prevention of occupational diseases, and whose name is attached to diagnostic procedures of international significance. In easy narrative style, the author tells of the romance and glamour, the heartaches and frustrations, the sobs and laughter of the world of occupations as observed in his experience. The book, moreover, is an absorbing detective story of the never-ending search for occupational diseases.

PERSONNEL WORK: *A Survey of Current Trends.* Western Personnel Service Pasadena, Calif., 1946. 33 pages. 50 cents. This pamphlet was prepared in cooperation with the Committee for Economic Development by a special committee of active personnel workers in industry, government, and education in the Los Angeles area. It presents a picture of war-

time changes in the personnel profession in the Southern California area and their effect on the duties, demand and supply, and qualifications of personnel workers.

PRICE CONTROL AND BUSINESS. By George Katona. The Principia Press, Inc., Bloomington, Indiana, 1945. 246 pages. \$3.00. Based on field studies among producers and distributors of consumer goods in the Chicago area during 1942-44, this monograph attempts to appraise price control, to describe its accomplishments, and to analyze the factors responsible for them.

TRAINING AND RESEARCH IN INDUSTRIAL RELATIONS. *Bulletin 1*, Industrial Relations Center, University of Minnesota, Minneapolis, Minn., October, 1945. 60 pages. These proceedings of a conference held May 25 and 26, 1945, include discussions of the objectives of training in industrial relations, securing management and labor cooperation in training and research, curricular needs for in-service and pre-service training, supervised internship provisions in business and labor organizations, principles and policies in financing training and research, needs and priorities in labor market and industrial relations research, inter-university cooperation in industrial relations research, inter-disciplinary cooperation in industrial relations research.

TRADE UNION PUBLICATIONS: *The Official Journals, Convention Proceedings, and Constitutions of International Unions and Federations, 1850-1941* (Vol. I—Description and Bibliography; Vols. II and III—Subject Index). The Johns Hopkins Press, Baltimore, Maryland, 1944. 1,347 pages. \$25.00. This monumental work unlocks the official journals and convention proceedings of international unions and national federations for research use. The index covers the journals and proceedings of a selected group of 50 unions and federations from the beginning of their history until the end of 1941. Includes a brief critique of the publications of each union, which provides an introduction to the life of the union as seen through its publications. Also contains a chronology and bibliography, not only for the unions indexed but for some 225 other unions for which a record of publication could be found in one of the major collections. Trade union constitutions are listed in the bibliography.

THE GREAT STEWARDSHIP: A Story of Life Insurance. By Albert W. Atwood. Harper & Brothers, New York, 1945. 201 pages. \$2.50. Traces the development of life insurance in the last century to define clearly for the general public the social service it renders, and to give assurance of its future strength and dependability. How the policyholder's money is invested, the legal protection he is afforded, the important part the agent plays in the industry's operation, how physical examinations for life insurance have fostered health and longevity, are interestingly treated. The experiences of well-known companies are cited to give a clear picture of the achievements of this vital institution.

PUBLIC RELATIONS DIRECTORY AND YEARBOOK—1945. Public Relations Directory and Yearbook, Inc., 82 Beaver St., New York 5, N. Y., 1945. 855 pages. \$15.00 (with supplements). Lists the names of more than 6,000 individuals, business firms, organizations, associations, and institutions interested in the tides of public opinion; offers sources of available information and suggestions for promotional and publicity tie-ups. An editorial section contains articles covering some 50 facets of public relations practice. Includes a "Pre-date Calendar of Events."

RECENT OCCUPATIONAL TRENDS IN AMERICAN LABOR: A Supplement to "Occupational Trends in the United States." By Dewey Anderson and Percy E. Davidson. Stanford University Press, Stanford University, Calif., 1945. 133 pages. Cloth, \$2.25; paper, \$1.50. Provides an understanding of occupational trends as revealed in the 1940 census and made available for study as late as June, 1944. The facts give much more than a hint of the nature and size of the labor force to which our economy must be adjusted in peacetime. To the census data has been added available material relating to wartime and postwar employment.

YEARBOOK OF AMERICAN LABOR (Volume I—War Labor Policies). Edited by Colston E. Warne et al. Philosophical Library, Inc., New York, 1945. Available from Institute of Labor Studies, 54 Prospect St., Northampton, Mass. 655 pages. Special-offer price: \$5.00 (plus 14¢ postage). This symposium on wartime labor policies covers the status of labor, the impact of government on labor relations, the status of special labor groups, wartime union policies, international relations of American labor; and includes several case studies of organized labor. The contributors are mainly labor spokesmen, government officials, and students of the labor movement.

DICTIONARY OF FOREIGN TRADE. By Frank Henius. Prentice-Hall, Inc., New York, 1946. 745 pages. \$10.00. Brings together in one volume a definition of foreign trade terms, usages, practices, and procedures. Also lists and explains the many abbreviations used in international trade.

101 WAYS TO BE YOUR OWN BOSS. By Michael Gore. Arco Publishing Com-

pany, New York, 1945. 128 pages. \$2.49, cloth; \$1.00, paper. A practical guide to small businesses that can be started with \$200 to \$5,000, including little-known opportunities in uncrowded fields.

A COUNSELING AID FOR HIGH SCHOOL DEANS OF GIRLS AND COUNSELORS. University of Cincinnati, Cincinnati 21, Ohio, 1945. 60 pages. Career articles written by women graduates of the College of Engineering and Commerce and the School of Applied Arts of the University of Cincinnati.

HOW TO EVALUATE SUPERVISORY JOBS. By Albert N. Gillett. National Foremen's Institute, Inc., Deep River, Conn., 1945. 141 pages. \$7.50. Outlines an unduly complicated program for evaluating executive and supervisory jobs and appraising job performance.

PLANNING FOR JOBS. Edited by Lyle Fitch and Horace Taylor. The Blakiston Company, Philadelphia, 1946. 463 pages. \$3.75. The plans and suggestions presented in this book—numbering approximately 200—were selected from nearly 36,000 essays submitted for the Pabst Postwar Employment Awards. The collection is of interest for two reasons: the merit of many of the individual proposals, and the evidence it affords of public thinking about the main issues of employment policy.

RETAIL MERCHANDISER'S HANDBOOK. By John Bradford. Bruce Humphries, Inc., Boston, 1945. 73 pages. \$2.00. Hints for the retailer on the arrangement of exterior and interior displays, with suggestions relative to space, customer psychology, and the use of lighting and window signs.

THE COST OF ENTERING NEW MARKETS. By Carl E. Wolf, Jr. *Economic Series No. 51*, Distribution Cost Unit, Bureau of Foreign and Domestic Commerce, Department of Commerce, Washington 25, D. C., 1945. 26 pages. Gratis. Discusses various cost considerations which should enter into a decision to establish new sales territories.

VS-BOXES. Container Testing Laboratories, Inc., 45 East 22nd Street, New York City. 16 pages. Gratis. A report to the Weatherproof Solid Fibre Box Group on the quality and performance of Vs-boxes. Describes in detail a variety of tests to which the containers have been subjected.

HOW TO DEVELOP PROFITABLE IDEAS. By Otto F. Reiss. Prentice-Hall, Inc., New York, 1945. 202 pages. \$3.00. Recommends tested procedures for transforming ideas into new products, new markets, and new promotions.

HOW LONG SHOULD IT TAKE? By Phil Carroll, Jr. Available from the author at 6 Crestwood Drive, Maplewood, New Jersey. 17 pages. 50 cents. A reprint of four noteworthy papers on rating time study effort.

SUPERVISORY TRAINING METHODS. By Barton Bayly. The California Council of Personnel Management, 870 Market Street, San Francisco 2, Calif., 1945. 24 pages. A field report reflecting the nature and extent of supervisory training methods used in 63 co-operating companies. Contains a selected bibliography of books and articles on the subject.

LET'S DISCUSS COLLECTIVE BARGAINING. Merchants and Manufacturers Association, 725 South Spring St., Los Angeles 14, Calif., 1945. 22 pages. Gratis. A helpful discussion of management strategy at the bargaining table.

INDUSTRIAL RELATIONS HANDBOOK. Ministry of Labour and National Service, London, England, 1944. Available from the British Information Services, 30 Rockefeller Plaza, New York City, 260 pages. \$1.05. An account of the organization of employers and workers in Great Britain. Discusses collective bargaining and joint negotiating machinery; conciliation and arbitration; and statutory regulation of wages in certain industries.

WARTIME TECHNOLOGICAL DEVELOPMENTS (*Senate Subcommittee Monograph No. 2*, May, 1945—418 pages; plus 1944 Supplement, September, 1945—197 pages). Prepared by the Productivity and Technological Development Division, Bureau of Labor Statistics, U. S. Department of Labor, Washington, D. C. A broad and detailed coverage of wartime technological advances is presented in the main study and the supplement. Includes valuable digests of information on more than 2,000 scientific discoveries and technical devices affecting such industries as aircraft, chemicals, communications, foods, machine tools, metals and metallurgy, packaging, petroleum, rubber, plastics, shipbuilding, textiles, and transportation.

HOW WE LIVE. By Fred G. Clark and Richard Stanton Rimanoczy. D. Van Nostrand Company, Inc., New York, 1944. 39 pages. \$1.00. A primer of economic facts which shows in simple fashion how our economy functions. Illustrated with pictographs and woodcuts.

MANUAL FOR LABOR AND MANAGEMENT COMMITTEES. T. K. Quinn Co.,

Inc., 110 East 42nd Street, New York City, 1945. 238 pages, loose-leaf, tab indexes. \$5.00. Compiled by the former Director-General of the War Production Drive, this manual documents the work of labor-management committees throughout the country, detailing their experiences with production and industrial relations problems. Includes a section on the postwar plans of hundreds of committees that have indicated their intention to continue indefinitely.

SUCCESSFUL SELLING FOR THE NEW DAY. By Harry Simmons. Harper & Brothers, New York, 1944. 281 pages. \$4.00. A guide to effective selling, this manual covers each stage of the sales approach—from seeking prospects to promoting repeat orders.

HANDBOOK OF NURSING IN INDUSTRY. By M. Gray MacDonald, R.N. W. B. Saunders Co., Philadelphia 5, Penna., 1944. 226 pages. \$2.50. This manual for industrial nurses clearly outlines the relationships of the nurse to the personnel, service, and welfare departments; discusses such problems as organizing and equipping the medical department, readjustment of the convalescent worker, when—and how—to conduct physical examinations, occupational diseases. Specific industrial nursing programs in actual operation today illustrate problems peculiar to the profession.

THE POSTWAR FOREIGN ECONOMIC POLICY OF THE UNITED STATES and POSTWAR PUBLIC WORKS AND CONSTRUCTION. Sixth and Seventh Reports of the House Special Committee on Postwar Economic Policy and Planning. United States Government Printing Office, Washington, D. C., 1945. 57 and 37 pages, respectively. These two reports, issued under the able directorship of Marion B. Folsom, Treasurer of the Eastman Kodak Company, will prove valuable reading to business men seeking a wider perspective on economic affairs. The Sixth Report discusses the underlying principles of international economics and makes a number of constructive recommendations for the freeing and expansion of international trade and investment. The Seventh Report emphasizes the importance of private construction in the postwar period and the need for keeping public works at a minimum.

LIBRARY SERVICE TO BUSINESS: Its Place in the Small City. By Marian C. Manley. American Library Association, 520 N. Michigan Avenue, Chicago 11, Ill., 1946. 72 pages. \$1.25. Here is another of Miss Manley's excellent discussions of the potentialities of library service for business men. This brochure will prove useful not only to the executive who desires help from the public library in his vicinity but also to companies which are establishing special business libraries of their own. The Appendix, *Building a Business Library—A Purchasing Guide for Small Libraries*, will be especially helpful to the individual confronted with the task of starting a special business library for his organization.

PUBLICATIONS RECEIVED

[Please order directly from publishers]

THE STORY OF SELLING: Yesterday, Today & Tomorrow. By H. K. Nixon, Thomas R. Carskadon, et al. The Crowell-Collier Publishing Co., New York, 1946. 75 pages. Gratis.

THE TRUTH ABOUT UNIONS. By Leo Huberman. Pamphlet Press, New York, 1946. 87 pages. \$1.00.

ASSESSING THE JOB: A Brief Summary of Job Analysis, Job Specification, Job Evaluation and Merit Rating. Edited by Industrial Welfare Society, Inc., 14, Hobart Place, Westminster, S.W.1, England, 1945. 28 pages. 2s 6d.

COST ACCOUNTING. By W. B. Lawrence. Third Edition. Prentice-Hall, Inc., New York, 1946. 606 pages. \$5.35.

HOW TO BE TOP SALESMAN. By W. S. Townsend. E. W. Smith Publishing Co., New York, 1945. 63 pages. Single copies, \$2.50. In quantity lots, \$1.50.

WORKING CONDITIONS AND EMPLOYEE SERVICES. By B. J. Cohen and M. M. Towy-Evans. Institute of Labour Management, Aldwych House, Aldwych, London, W.C. 2, England, 1945. 87 pages. 2s.

INDUSTRIAL TRAINING AND TESTING. By Howard K. Morgan. McGraw-Hill Book Co., Inc., New York, 1945. 225 pages. \$2.50.

ACCOUNTING PRINCIPLES: Fourth Edition. By Howard S. Noble. South-Western Publishing Co., Cincinnati, Ohio, 1945. 768 pages. \$4.00.

- PLANNING OF RESEARCH AND DEVELOPMENT WORK.** By Dwight L. Williams. Wallace Clark & Co., 521 Fifth Ave., New York. 27 pages. Gratis.
- ACCOUNTING PROBLEMS ARISING FROM TAX AMORTIZATION OF EMERGENCY FACILITIES (Section II, Research Series No. 6).** National Association of Cost Accountants, 385 Madison Ave., New York, 1946. 19 pages.
- HOW TO BUY SURPLUS MACHINE TOOLS.** National Machine Tool Builders' Association, Cleveland, 1946. 21 pages. Gratis.
- MANAGEMENT CAN BE HUMAN.** By Harvey Stowers. McGraw-Hill Book Co., Inc., New York, 1946. 131 pages. \$1.50.
- THE VETERANS' BEST OPPORTUNITIES: *With Basic Business Principles and Their Application.*** By Edward R. Fiske. Essential Books, New York, 1946. 324 pages. \$2.50.
- CHANNELS FOR TRADING ABROAD.** By Corrie Cloyes and Edmund F. Becker. *Economic Series No. 52*, Division of Commercial and Economic Information, Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, Washington, D. C., 1946. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 26 pages. Gratis.
- RECREATION CONGRESS PROCEEDINGS.** National Recreation Association, 315 Fourth Ave., New York 10, N. Y., 1946. 179 pages. \$1.75.
- THE THEORY OF MONOPOLISTIC COMPETITION.** By Edward H. Chamberlin. Fifth Edition, revised. Harvard University Press, Cambridge, Mass., 1946. 282 pages. \$3.50.
- MANUAL OF ADVISEMENT AND GUIDANCE: *Prepared in Accordance With the Approved Policies of The Veterans Administration.*** By Ira D. Scott. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 1945. 233 pages. \$1.25.
- CREATING SALES.** By John R. Hartman. Charles Morris Price School of the Poor Richard Club, 1319 Locust St., Philadelphia, Penna., 1945. 167 pages. \$3.00.
- TYPEWRITER CARE. *Equipment Maintenance Series, Bulletin No. 1.*** Federal Work Improvement Program, U. S. Civil Service Commission and Procurement Division, U. S. Treasury Department, Washington, D. C., 1945. 19 pages.
- THE END OF PRICE CONTROL—HOW AND WHEN?** Committee for Economic Development, 285 Madison Ave., New York 17, N. Y., 1946. 13 pages. Gratis.
- WHY WOMEN WORK: *Financial Responsibilities of Working Women for Self-Support and for Dependents in New York State.*** Division of Industrial Relations, New York State Department of Labor, Albany, 1946. 19 pages.
- CHECK LIST TO HELP YOU INTRODUCE YOUR NEW INDUSTRIAL PRODUCTS. *Economic Series No. 53.*** Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, Washington, D. C., 1946. Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 26 pages. 10 cents.
- NATIONAL ADVERTISING IN NEWSPAPERS.** By Neil H. Borden *et al.* Harvard University Press, Cambridge, Mass., 1946. 486 pages. \$5.00.
- PURCHASING AND INVENTORY CONTROL FOR A SMALL BUSINESS. *Small Business Series No. 5.*** State of New York Department of Commerce. 19 pages. Gratis.
- EMPLOYEE ORGANIZATIONS IN THE PUBLIC SERVICE.** National Civil Service League, New York. 31 pages. 25 cents.
- THE WAR ON MALNUTRITION: *The Role of Consumer Co-operatives.*** By J. Murray Luck. Harper & Brothers, New York, 1946. 203 pages. \$2.50.
- BRAZIL ON THE MARCH: *A Study in International Cooperation.*** By Morris L. Cooke. McGraw-Hill Book Co., Inc., New York, 1944. 303 pages. \$3.00.
- ADJUSTMENT OF NEGRO VETERANS: *A Report of the Adjustment Problems of Negro Veterans in 50 Cities.*** National Urban League, 1133 Broadway, New York, 1946. 9 pages.
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